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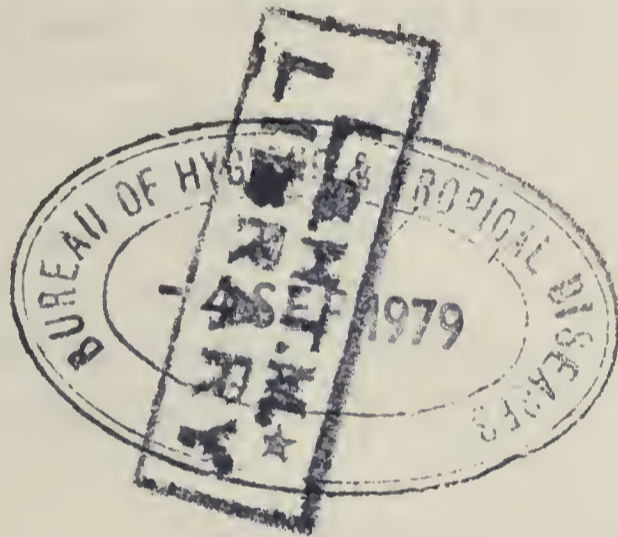
VICTORIA



Fifty-sixth Report

COMMISSION OF PUBLIC HEALTH

For the year ended 30 June 1978



*Presented to Both Houses of Parliament Pursuant to the Provisions of
Section 23 (3) of the Health Act 1958*

MELBOURNE

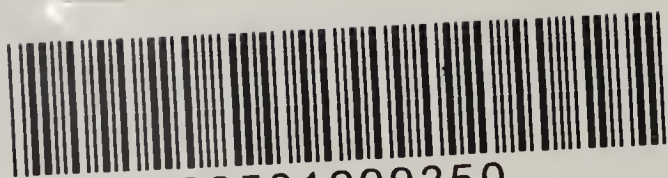
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Fifty-sixth Report of the Commission of Public Health

1977-78

To the Honorable William Vasey Houghton, M.L.C.

SIR,

We have the honour to submit, in accordance with Section 23 (3) of the *Health Act 1958*, our report for the year ended 30th June, 1978.

During the period under review the Commission met on 25 occasions.

The period under review has seen a continuance of the upsurge of food borne illness in the community leading to a very substantial burden on all those concerned with the responsibilities placed on them by the Parliament under the Health Act. This includes the Municipal Health Surveyors throughout the State, the Public Analysts, and particularly the Microbiological Diagnostic Unit of the Melbourne University whose dedicated staff have dealt with a veritable deluge of work most of which has been regarded as urgent. Departmental staff have of course also been heavily involved in this work at times necessitating the deferment of other work.

Overlapping with the previous period reviewed was an outbreak of *Salmonella bredeney* infection in infants due to contamination of three brands of infant milk powder. This was quickly followed by *Salmonella adelaide* infection of another milk derivative, calcium caseinate, which in turn led to the contamination of other food products including an invalid food supplement. These problems necessitated a full enquiry and detailed discussions were held with experts from the Commonwealth Departments of Health and Primary Industry, the C.S.I.R.O., the Victorian Department of Agriculture and Melbourne University with a view to preventing further such occurrences.

The Health (Control of Pathogens) Regulations 1977 were recommended to the Minister and since coming into force have proved a valuable addition to our controls with respect to contaminated foodstuffs. The decision to form a food unit within the Health Department will also greatly assist in the improvement of standards within the food industry we believe.

This increase in food borne illness, which fortunately is not paralleled with respect to most other infectious diseases, is associated with a very large increase in the sale of convenience foods and meals prepared away from home in hotels, restaurants, cafes and take-away food establishments. This trend will undoubtedly continue and only increasing vigilance coupled with much greater training at all levels within the food industry will keep the risk of food borne illness at acceptably low levels.

The immunization programmes have continued to achieve highly satisfactory levels of immunity of our children against such diseases as diphtheria, whooping cough, poliomyelitis and tetanus. The importance to our children's health of the continued success of these programmes is underlined by the recent United Kingdom experience where epidemic levels of whooping cough with all its unfortunate sequelae are occurring. This is attributed to a marked drop in the acceptance of whooping cough immunization by parents for their infant children because of unjustified fears of untoward side effects. Closer to home, the occurrence of paralytic poliomyelitis in unimmunized infant children of migrant parents is also a timely reminder of the continuing importance of these vaccinations.

Due to the magnificent success of the global smallpox eradication campaign organised by the World Health Organisation it has now become possible to advise the omission of this vaccine from the routine childhood immunisation programme.

During the year the Commission had its attention drawn to a cluster of congenital malformations which occurred in births to women in the Yarram district during the 12 months June 1975 to June 1976. Two general practitioners in the area, in reporting this cluster, linked their occurrence to the use of the herbicides 2, 4-D and 2, 4, 5-T. Accordingly it was recommended to the Minister that a working party be set up to review the information that had been collected about the occurrence of congenital abnormalities in the Yarram area and to report to the Honorable the Minister on any change considered appropriate in the notification, surveillance and further study of congenital abnormalities within Victoria.

This particular incident has created a considerable degree of public concern and the report of the Consultative Council which is to be placed before the Parliament should prove of great value.

Despite the importance of these fields of activity we must develop new strategies in our Public Health endeavours to help reduce alcohol abuse and cigarette smoking where without any doubt the greatest gains are to be made in improving the community's health. Much more attention needs to be given to the contribution of diet to disease in the community, and in implementing all the known and practicable means of lowering the amount of coronary heart disease. There are also important new developments in the area of environmental carcinogenesis and mutagenesis which will have to be examined and where selective controls may have great benefit.

Finally we must not let the daunting task of so many fruitful areas of preventive medicine requiring development make us lose sight of the ideal of health promotion, an early start to which has been made by another Ministry with the "Life—Be in it" campaign and which has so captured the interest of the Community. This type of approach when sensitively and imaginatively handled has exciting prospects for directing the public's attention to the desirability of achieving and maintaining good health and of relatively simple ways in which this may be accomplished. Whilst some groups of people will be resistant to this we must build up public opinion and social customs that will gradually enhance healthful life styles.

On the 10th February, 1978, the Health Areas promulgated in the *Victoria Government Gazette* of the 7th January, 1976 were brought into operation for administrative purposes. The major change was a considerable enlargement of the metropolitan health area, especially by including the Mornington Peninsula and Westernport regions.

Members of the Commission wish to record their appreciation of the excellent Secretaryship provided by Mr. J. F. Rayner for the 12 months when the Secretary, Mr. J. V. O'Donoghue was absent.

EPIDEMIOLOGICAL AND INFECTIOUS DISEASES REPORT

VIRAL HEPATITIDES

From a public health standpoint viral hepatitis in Victoria is the most common notifiable and serious infectious diseases for which no specific treatment exists. It occurs in three forms: hepatitis A and B which can be identified by their respective antigens and corresponding antibodies, and a third form which is distinguished by a lack of surface antigens in the serum, no development of antibodies to hepatitis A and B, a median incubation period of two to fifteen weeks and no evidence of infections with other viruses. In this State it is confined to drug users and its positive characteristics are still being investigated.

Most of the metropolitan cases were notified by Fairfield Hospital which recorded a mortality of 3 for hepatitis A and B respectively.

HEPATITIS A

Cases for 1977 numbered 699 which is a decrease on the previous year's total of 832. The metropolitan area (using the old boundaries) recorded 429 as opposed to 270 for the rest of the State. There were 444 males and 255 females. The age group most affected was 20–24 years (30%) while 61% were aged between 15 and 29 years. There was a minor peak in the age incidence curve in the 5–9 years group which reflects an increased transmission in the first years at school.

Personal hygiene still remains the best method of prevention—a message that needs constant reiteration in schools and in the food industry.

HEPATITIS B

Notifications totalled 188 of which 128 were males and 60 females. The metropolitan area accounted for 142 (6.5 per 100,000) and the rest of the State had 46 (2.9 per 100,000). The city of St. Kilda had the highest incidence of 28 per 100,000.

Three cases were known to have been associated with recent tattooing, a skin penetrating procedure which, along with ear piercing, is now controlled by legislation.

Although the true incidence of the infection in our community is uncertain, recent special surveys suggest that it is rare among blood donors but common in special groups e.g. South-east Asian migrants, users of intravenous drugs, and inmates of institutions for the mentally retarded.

TETANUS

There were three moderately severe cases in unimmunised middle-aged people from metropolitan areas. In one case there was no history of a prior injury while in the others the causes were an electrical burn and a gardening injury respectively.

Recently many municipalities have conducted tetanus toxoid immunisation sessions (in conjunction with their Sabin campaigns) in an effort to provide both primary courses and 10 yearly booster injections for the adults of their communities who are the main target age group for this serious but eminently preventable disease.

ZOONOSES

Notifications for these diseases comprised:—

Brucellosis	..	..	..	..	..	21
Helminthiasis	..	..	..	..	..	5
Hydatidosis	..	..	..	..	..	3
Leptospirosis	..	..	..	..	..	8
Ornithosis	..	..	..	..	..	1

Acute brucella abortus infections were again reported in specific occupational groups. Ten of the 16 cases notified from rural areas were associated with dairy farms chiefly in Gippsland, while the balance of cases and those in the metropolitan area were mostly among meat workers. One case was a milk truck driver. A joint survey of workers at two large abattoirs by officers of the Departments of Agriculture and Health was conducted early in the year in an attempt to better define modes of transmission of the disease among mutton workers. Meanwhile the Brucella eradication campaign which offers an ultimate solution to this debilitating disease is proceeding satisfactorily.

Helminthiasis was discovered by the routine screening for intestinal parasites of Indo-Asian refugees. Taenia saginata was also reported in a 65 years old Lebanese woman. Specific treatment has been given to all cases.

Two sheep farmers aged 54 and 68 years from the Western District were reported as having hepatic hydatid cysts while a 5-year-old boy from Yugoslavia has had a lung cyst diagnosed by X-ray. A dog dosing campaign by a drug firm using a new cestocide—praziquantel—in the rural areas of mainland Australia will be watched with interest, while a new drug treatment—merbendazole—has already passed several clinical trials in overseas countries, thereby promising to be a valuable adjunct to surgical treatment if not replacing it altogether.

The cases of leptospirosis (hardjo) were all dairy farmers from country areas. Health education of this occupational group still remains the principal preventive measure.

A clinical case of ornithosis was reported in a 24-year-old man who kept an aviary.

TYPHOID AND PARATYPHOID FEVER

Thirty-eight of the 41 notified cases of typhoid fever were associated with the Ringwood outbreak which was detailed in the last annual report. Further follow-up investigations to detect possible carrier states among those cases will be conducted in the near future.

The other cases reported were:—

- a 9-year-old boy who became ill shortly after returning from a visit to Turkey. Faecal cultures yielded phage type (degraded) organisms, probably D1.
- an 8-year-old boy recently migrated from Lebanon presented with a urinary tract infection and was subsequently found to be excreting a phage type D1 organism.
- a 7-year-old Ceylonese girl became febrile following an appendectomy and was later found to be excreting a phage type E1 organism. Though she had not been out of the country she had, during the week prior to illness, attended several family buffet dinners. However screening of suspected carriers failed to detect the source of infection.

There was one case of *S. paratyphi* A infection in a 27 years old woman who had recently returned from a visit to South-East Asia.

Cases of Paratyphoid B infections occurred in a 33 years old man who had travelled in Southern Europe and the Middle East, and a 22 years old woman who had become ill while touring India.

IMPORTED DISEASES

There were 47 cases of Malaria notified. Ten of these were Plasmodium Falciparum infections and of these 3 had been travelling in West New Guinea and exhibited chloroquine resistance. The other 7 cases of this more severe infection had either taken irregular chloroquine or none at all, or had ceased it too early on return from New Guinea or India.

The balance of cases was *Pl. vivax* infections as follows:—

Travellers to:	New Guinea	..	..	..	21
	India and South-East Asia	..	..	..	5
	South-East Asia	..	..	..	1
	India	..	..	..	1
	South Solomons	..	..	..	1
	Cyprus	..	..	..	1
Migrants from:	India	..	..	..	5
	South-East Asia	..	..	..	2

Some of these cases had taken irregular chemoprophylaxis or none at all. Most had not availed themselves of the chloroquine–primaquine course upon leaving the malarious area.

The other exotic diseases were as follows:—

Amœbic infections—

- 5 Indo-Asian refugees
- 1 Indian (abscess)

Bacillary dysentery—

- 2 *Sh. dysenteriae* type 1 from South-East Asia
- Sh. dysenteriae* type 2 from the Middle East

Helminthiasis—

- 5 Indo-Asia and Lebanon

Hepatitis B antigen—

- 59 Indo-Asian refugees

Hookworm infestation—

- 1 Philippines

Leprosy—

- 6 India (2) Sri Lanka 2
- Indonesia and Seychelles

Paratyphoid fever—

- 2 (See above)

Typhoid fever—

- 2 (See above)

Salmonella infections—

- 18 Indo-Asian refugees

Paralytic poliomyelitis—

- 1 Turkey

This array of exotic infections highlights the need for adequate medical screening of people entering Australia from countries where disease is endemic. Tourists should be warned of the health hazards of travelling to certain countries and instructed on vaccination requirements and malarial chemoprophylaxis. The need for a Commonwealth–State agreement on areas of responsibility regarding screening of migrants and the issuing of advice to would-be travellers are important pre-requisites to the provision of adequate preventive services.

GASTRO-ENTERITIS

The recent large outbreak of food poisoning affecting more than 1100 Victorian people as well as many others interstate has been linked epidemiologically to the eating of oysters taken from the Georges River, N.S.W. The symptoms of vomiting and diarrhoea usually appeared 24 to 36 hours after the meal and disappeared within a few days. In some cases the illness lasted up to 2 weeks. So far, laboratory tests which include chemical, microbiological and electron microscopic studies on food and faecal specimens have failed to incriminate a specific pathogenic agent, though it is clear that several batches of oysters had been subjected to pollution by faecal material before being opened and probably while in the oyster beds. Following a public announcement by the Minister of Health, sales of oysters from Victorian outlets ceased until further advice could be given that new supplies were considered safe for human consumption.

Other outbreaks of food poisoning included the following:

- Thirteen people became ill 10 hours after eating food from a take-away food premises. Though no laboratory confirmation was made it was evident that poor food handling techniques had probably caused the outbreak.
- Nine people in a party of 50 attending a chicken curry dinner party developed severe gastro-enteritis found to be due to *Salmonella typhimurium* (phage type 12). Food spoilage was caused by improper preparation and cooking.

Salmonella notifications (185) almost tripled the 1976 total and this was due largely to the common source outbreak of gastro-enteritis involving over 50 infants, caused by *S. bredeney* contamination of several infant foods which had all been processed in one country-based milk processing factory. Investigations soon disclosed that several cracks in the metal cone of the spray dryer used in the operation had allowed bacterial contamination of the surrounding insulation material, thereby providing a permanent contaminating source resistant to normal sterilising procedures.

Appropriate control measures included withdrawal from the market of suspected infant milk powder, and public announcements of the dangers of using these contaminated products. In the wake of this outbreak new Regulations requiring immediate notification of *Salmonella* isolations in food premises, etc., have been introduced. Already they have revealed, as have routine inspections of milk processing plants, that this particular industry is prone to such bacterial contamination. The outbreak has also provoked a greater awareness in public health circles of the dimensions of the Salmonellosis problem and the need for a national surveillance system.

Other salmonella serotypes reported were typhimurium (47), derby (21), bovis morbificans (6), infantis (4), newport (2), adelaide (2), anatum (2), give, panama, london and weltevreden. In many cases source investigation revealed contaminated food.

Shigella infections totalled 20 and occurred, usually as isolated cases, in children during the warmer months. In the winter there was an outbreak of rotavirus in the toddlers' section of a day nursery affecting 14 children. Children with this infection often become severely dehydrated and require hospitalisation. There is a high infection rate amongst the newborn and children generally.

Dysenteric infections acquired overseas are listed under Imported Diseases.

ENTEROVIRUS INFECTIONS

The summer epidemic of this excrementally spread disease is reflected in the number of hospital cases of viral meningitis. In the 1976–77 summer period the predominant strain was ECHO virus Type 19. During the recent epidemic there was no one strain predominating and isolations included ECHO viruses types 6, 7, 9, 19 and 30. Type 9 infections often cause febrile illness with an erythematous rash resembling that due to rubella.

The single case of poliomyelitis infection is detailed elsewhere.

RESPIRATORY VIRUS INFECTIONS

These very common illnesses, caused by a large number of virus types, range in severity from the common cold to severe pneumonia. Virus isolations from hospital cases reflect the prevalent agents in the community. Generally the incidence of respiratory diseases requiring hospitalisation was at a low level during the 1977 winter.

An unusually late appearance of the annual influenza epidemic occurred in September and produced fewer complicated cases than in previous years, though one death was recorded following influenzal pneumonia. By November, the outbreak due to Influenza virus type A/Victoria/75 was subsiding.

The annual epidemic of bronchiolitis was smaller than usual and by September had almost subsided. This illness is caused by Respiratory Syncytial Virus.

In August an outbreak of epidemic kerato-conjunctivitis was reported, occurring in institutions. It was due to adenovirus type 8 which is known to be capable of causing persistent and discomforting conjunctivitis.

Croup in infants occurred in April, and was due to M. Parainfluenza type 1. By June this epidemic had waned.

In the recent summer, and again in June 1978, several cases of pneumonia due to *Mycoplasma pneumoniae* were admitted to Fairfield Hospital. Not strictly a viral illness it is fortunately responsive to tetracycline treatment.

Early this year it was anticipated that there would be a widespread winter circulation of Influenza type A strains known as A/Texas/77 and A/USSR/77 and that the latter could involve the younger age groups. Accordingly, the Commonwealth Serum Laboratories prepared vaccine containing these components as well as that of A/Vic/75. By mid year, however, surprisingly little Influenza type A was detectable, but a few strains of type B have been grown from children.

TUBERCULOSIS REPORT

Introduction

This report for 1977 calendar year records a number of milestones in the Tuberculosis Branch activities. 1977 was the last full year of service for Dr. Ray Marshman and an appreciation of his services will feature in our next report.

Another milestone was withdrawal by the Commonwealth Government at 31st December, 1976, of its financial support for the State's tuberculosis campaign which was introduced following the agreement of 1948. Victoria, with all the other States, became totally responsible for financing its own campaign.

1977 was the first year since 1963 without compulsory community X-ray surveys and, as expected, there was a significant drop in the number of new notifications of tuberculosis. The cost of finding a new case by compulsory surveys was mounting and the decision to suspend surveys was one of the economic measures taken by the Government as a result of the Commonwealth action mentioned above.

The cost of *not* finding new cases in their early stages and before they have spread their infection to others has yet to be determined. The Government has wisely decided to retain a nucleus of survey staff and equipment and is keeping the matter under regular review. It is yet too soon to note any significant trends.

Another aspect upon which comment is required is the fact that apart from discovering cases of tuberculosis the X-ray surveys brought to light many non-tuberculosis conditions including cases of lung cancer and lung sarcoid. Most chest physicians outside the Branch have commented that since surveys were suspended they are seeing fewer patients with these conditions, particularly lung cancer in the early stages, whilst there is some hope of effective treatment. The loss of this "spin off" gain from X-ray surveys carried out for control of tuberculosis can not be measured in terms of dollars and cents but represents the loss of a significant public health measure.

The final milestone for 1977 was the move to "Enterprise House" where for the first time in the history of the Branch, central administration, the central chest clinic, the X-ray survey section and the B.C.G. division, were all housed on two adjacent floors of the same building.

Review

Victoria's estimated population at June 30th 1977 was 3,789,300.

There were 274 new notifications during the year, compared with 311 in 1976, corresponding rates per 100,000 population being 7.2 and 8.5. Including persons with reactivated tuberculosis the total new case load was 299 persons. Adding 7 chronic cases there was a total of 306 persons with active tuberculosis, 40 less than in 1976. The decline in case load is almost certainly mainly due to the cessation of "aggressive" case finding in the form of community mass X-ray surveys.

Year	Active Cases				Total
	New	Rate per 100,000	Reactivated	Chronic	
1964	820	25.93	72	86	978
1965	790	24.50	84	66	940
1966	649	19.98	78	59	786
1967	599	18.13	80	49	728
1968	535	15.94	57	38	630
1969	497	14.50	44	38	579
1970	421	12.11	61	33	515
1971	416	11.78	23	19	458
1972	371	10.42	42	15	428
1973	369	10.25	38	10	417
1974	321	8.81	31	8	360
1975	291	7.93	29	3	323
1976	311	8.58	31	4	346
1977	274	7.23	25	7	306

Of the new cases reported 46% were born outside Australia; most of these were non-British and 38 of them came to Australia within a year. Sixteen notifications resulted from screening Indo-Asian evacuees. This again emphasises the continuing need for adequate screening for tuberculosis before entry to, or on arrival in Australia.

With the decline in notifications resulting from cessation of community X-ray surveys, it appears that more people are apparently developing symptoms before a diagnosis is established and attend their own doctors or public hospitals. These latter sources together accounted for 56% of the new cases, a total of 153 patients, whilst clinics located 50 cases, 18%—which included many from examination of contacts.

Attention also is directed to the increased number of persons reported to have died with or because of active tuberculosis. There were 13 active death notifications and another 13 who had active tuberculosis at the time of their terminal illness.

Indo-Asian Refugees

Again in 1977 two batches of refugees totalling 235 were housed at Heatherton Hospital on arrival in February and March.

Nineteen were retained at the hospital for further investigation or treatment for tuberculosis and 16 were notified as active cases.

In late 1977 larger batches of refugees were screened by the Branch but not housed in the hospital.

This screening took the form of tuberculin testing and X-ray examination of all the positive reactors. As a result of this 29 persons were admitted to hospital early in 1978 for full assessment. The result of this survey will be reported next year.

Notifications (See Tables 1, 2, 3, 4, 5 and 6).

Of the 274 new cases, 221 (81%) were pulmonary cases and 53 (19%) were extra-pulmonary. 74% of all cases were bacteriologically proven, pulmonary 75% and extra-pulmonary 73%. There were 179 males (65.3%) and 95 females (34.7%).

Bovine type myco-bacteria were isolated from 3 patients.

There were 4 new cases reported from whom a typical myco-bacteria were isolated.

Age Groups

The distribution of notifications in age groups is listed below. The figures for children under 15 years is 9% of the total.

32% of all new cases were 60 years and over.

71% of all new cases were 35 years and over.

53% of all new pulmonary cases were males 35 years and over.

52% of all new pulmonary cases were 50 years and over.

Staging of Pulmonary disease

Of the cases of pulmonary disease once again approximately 10% of the cases were primary. Minimal, moderate and advanced disease all occurred in about the same proportion although advanced disease was slightly lower.

Extra-Pulmonary Tuberculosis

There were 53 cases reported. Tuberculosis of the renal and genital organs continues to be the most common—23 cases. There were 10 cases of bone and joint tuberculosis and 1 case of meningitis. Tuberculosis of lymph glands is greater this year, 16 cases were reported; some of these are due to a typical mycobacterial infection.

Source of Notification

Mass X-ray surveys were responsible for 24 cases (8·7%) of the pulmonary form. General hospitals were credited with 85 (31%) of the total and private medical practitioners were responsible for 68 (25%). State clinics reported 50 cases (18%). There were 13 notifications from death certificates (5%).

One case was reported from Mental Hospitals, one new case was detected by the routine survey of inmates on entry to Pentridge and no cases resulted from B.C.G. Division activities.

The majority of the 17 cases reported from the chest hospitals are a direct result of screening of Indo-Asian refugees.

Migrants

Forty-six per cent of the year's notifications were from persons born outside Australia, i.e., 125 cases. The 1971 census figure is 22·8% of the Victorian population. Eighteen persons were British and 107 non-British. Thirty-eight persons (30%) were reported within one year of arrival (37 non-British); of the 53 extra-pulmonary cases reported, 31 were born outside Australia and 4 were British.

Reactivations

There were 25 persons previously notified whose tuberculosis again became active after at least three years stability. Seventeen were bacteriologically proven at reactivation. Pulmonary reactivation occurred in 18 cases and extra-pulmonary in 7. Fourteen of the cases had been stable for 15 years or longer. Ten had no previous chemotherapy, 2 apparently adequate chemotherapy. Of the remainder (13) chemotherapy was inadequate on clinical review.

For the first time in many years, no "relapses"—i.e., reactivated within 3 years of achieving clinical stability, were reported.

Case Register (See Table 7).

It has not been possible for the case register to be as up-to-date as desirable, due to staff shortage but nevertheless supervision of known active cases has been maintained.

On 31st December 1977, the case register for active ceases had 1,591 persons recorded, of whom 1,364 had pulmonary and 227 had extra-pulmonary disease. 401 listed names were removed from the register during the year. 742 patients were receiving chemotherapy.

TABLE 1—TUBERCULOSIS NOTIFICATIONS (ALL FORMS) 1977

Total New Notifications : 274 : Rate 7.23 per 100,000 of Population (Estimated 3,789,300 at 30.6.77)

Age Group—Years	Pulmonary						Non-pulmonary			All Forms	
	Male	Female	Total	Percentage	Male	Female	Total	Percentage	Total	Percentage	
	0—14 ..	14	6	20	9.1	3	2	5	9.5	25	9.1
15—24 ..	9	3	12	5.5	3	3	6	11.3	18	6.5	
25—34 ..	17	12	29	13.1	3	6	9	16.9	38	13.9	
35—44 ..	19	6	25	11.3	3	5	8	15.1	33	12.1	
45—59 ..	41	17	58	26.2	9	4	13	24.5	71	25.9	
60 and over ..	56	21	77	34.8	2	10	12	22.7	89	32.5	
Total ..	156	65	221	..	23	30	53	..	274	..	
Percentage ..	70.6	29.4	..	100	43.4	56.6	..	100	..	100	
Pulmonary ..	81 per cent.						70.5 per cent of all new cases were 35 years and over.				
Non-Pulmonary ..	19 per cent.						52.5 per cent. of all new pulmonary cases were males 35 years and over.				
							52.2 per cent. of all new pulmonary cases were 50 years and over.				
Cases	Bact. Positive						Histol. Positive			Total Proven	
	Bact. Positive			Percentage	Histol. T.B. only			Total	Percentage		
Pulmonary ..	166		75.1	2		168	76.1				
Non-pulmonary ..	39		73.6	5		44	83.1				
Total ..	205		74.8	7		212	77.4				

TABLE 2—NOTIFICATIONS 1977 : STAGINGS : PULMONARY

<i>Sex</i>	<i>Pleural Effusion</i>	<i>Primary</i>	<i>Minimal</i>	<i>Moderate</i>	<i>Advanced</i>	<i>Total</i>	<i>Percentage</i>
Male ..	4	13	47	50	41	156	70.6
Female ..	5	8	21	18	13	65	29.4
Total ..	9	21	68	68	53	221	..
Percentage ..	4.2	9.6	30.9	30.9	23.9	..	100

TABLE 3—NOTIFICATIONS 1977 : NON-PULMONARY

<i>Type</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Percentage</i>
Glands	5	11	16	30.3
Bones and Joints	6	4	10	18.8
Renal	9	10	19	35.9
Genital	1	3	4	7.6
Meningitis	1	..	1	1.8
Peritonitis .. .. .	..	1	1	1.8
Other .. .. .	..	2	2	3.8
Total	22	31	53	100

TABLE 4—SOURCE OF NOTIFICATIONS 1977

<i>Source</i>	<i>Pulmonary</i>		<i>Non-Pulmonary</i>		<i>Total</i>	<i>Percentage</i>
	<i>No.</i>	<i>Percentage</i>	<i>No.</i>	<i>Percentage</i>		
Chest Hospitals ..	15	6.8	2	3.7	17	6.2
State Clinics ..	50	22.6	..	..	50	18.2
Mass Survey ..	24	10.9	..	..	24	8.7
General Hospitals; ..	59	26.8	26	49.1	85	31.1
Private Doctors ..	44	19.9	24	45.3	68	24.8
Repatriation ..	16	7.2	..	..	16	5.8
Death Certificate ..	12	5.4	1	1.9	13	4.8
Mental Hospitals ..	1	0.4	..	..	1	0.4
Total	221	100	53	100	274	100

TABLE 5—NOTIFICATIONS 1977 : " MIGRANTS "

Migrants represent 45.6 per cent of Total Notifications
 Migrants represent 22.8 per cent. of Total Population (1971 Census)

<i>Arrival in Australia</i>				<i>British</i>	<i>Non-British</i>	<i>Total</i>	<i>Percentage</i>
Within 1 year	..	..	..	1	37	38	30.4
Within 5 years	..	..	..	4	22	26	20.8
Within 10 years	..	..	..	..	13	13	10.4
10 years and over	..	..	..	13	33	46	36.8
Unknown	..	..	..	..	2	2	1.6
Total	..	..	..	18	107	125	100

TABLE 6—REACTIVATED CASES OF TUBERCULOSIS 1977

	<i>Males</i>		<i>Females</i>		<i>Total</i>	<i>Percentage</i>
	<i>Pulmonary</i>	<i>Non-Pulmonary</i>	<i>Pulmonary</i>	<i>Non-Pulmonary</i>		
<i>Type of Disease</i>						
At Reactivation	12	6	6	1	25	100
<i>Criteria of Re-activation</i>						
Bacteriological	8	4	4	1	17	68
Radiological	4	..	2	..	6	24
Histological	..	..	..	..	..	..
Clinical	..	2	..	..	2	8
<i>Previous Chemotherapy</i>						
" Adequate "	1	..	1	..	2	8
Poor	7	3	3	..	13	52
Nil	4	3	2	1	10	40
<i>Period between last treatment and Re-activation</i>						
Within 5 years	2	2	3	..	7	28
Within 10 years	2	..	..	..	2	8
Within 15 years	2	..	..	..	2	8
15 years and over	6	4	3	1	14	56
<i>Disposal</i>						
Dept. Inst.	9	..	3	..	12	48
Repat. Inst.	2	2	..	..	4	16
Non-Dept. Inst.	..	2	1	..	3	12
Domiciliary	1	2	2	1	6	24

TABLE 7—STATISTICAL ANALYSIS OF CASE REGISTER AS AT 31ST DECEMBER 1977

	No.	Percentage
<i>Staging of Cases</i>		
Minimal	376	24
Moderately advanced	522	33
Far Advanced	316	20
Primary	100	6
Pleural Effusion	46	3
Extra Pulmonary	227	14
Not Staged	4	..
Total	1,591	100
<i>*Activity of Cases—Pulmonary</i>		
Active	407	30
Quiescent (Persistent cavitation)	346	25
Inactive	611	45
Total	1,364	100
<i>*Activity of Cases—Non-Pulmonary</i>		
Active	83	37
Quiescent	14	6
Inactive	130	57
Total	227	100
<i>Cases Removed from Case Register During 1977</i>		
Meeting International Criteria of Cure (Inactive 3 years).. .. .	276	69
Died	74	19
Left Victoria to reside elsewhere	34	8
Revised diagnosis	17	4
Total	401	100

* Old Classifications.

The case register continues to be an important adjunct to tuberculosis control, especially aiding supervision of persons changing their places of living, and those who carry a higher risk of relapse, or risk to others if they relapse (e.g. kindergarten workers, school teachers, etc.). Special lists of names of such people are kept to enable closer supervision.

Appreciation is again acknowledged for the co-operation of the staffs of the Bacteriological Laboratory at the Fairfield Hospital and the Repatriation Department and to many private medical practitioners who supply information

“Chronic Positive” Cases

A record is maintained of patients who are known to have had active disease with positive bacteriological examinations for twelve months or longer. At 31st December, 1977, there were 6 “chronic positive” cases and one person excreting atypical myco-bacteria.

Deaths (Tables 8 and 9)

The figure supplied by the Commonwealth Bureau of Statistics for deaths is not yet available. Records of those having died during the year included 26 persons who had had evidence of active tuberculosis at death or reported within six months of death. The average age at death was 68·4 years.

Tuberculosis Allowances

At 31st December 1977, there were 60 persons being paid the Tuberculosis Allowance, compared with 67 at the end of 1976. Of these persons 47 were men and 13 were women, 26 were receiving in-patient care and 34 were out-patients. There were 52 (86%) in receipt of the allowance for less than one year, 8 between one and two years and nil between two and three years. For those receiving the allowance for less than a year, the average duration of payment was 3·9 months and of the 93 cancelled during the year, 49 returned to work, 31 transferred to other social welfare benefits, and the others for various reasons.

The Tuberculosis Allowance is a special allowance payable by the Commonwealth Social Security Department and is primarily intended to encourage and enable those with active and infectious or potentially infectious tuberculosis to cease work and accept treatment.

X-Ray Surveys (Table 10)

Survey's activities were conducted in 1977 on a much reduced scale, initially at “Milton House” in Flinders Lane. In March public surveys were commenced at Enterprise House using 100 mm. roll film and in July all the operations were conducted from there. Special surveys were continued using one mobile 70 mm. film unit.

During the year under review a total of 48,513 films were taken. Forty-five thousand four hundred and sixty-one of these were micro films, public survey's share being 29,121 and special survey's 16,340. Large films taken at Milton and Enterprise Houses accounted for 3,052. A total of 884 abnormalities were detected.

A breakdown of public survey micro films taken at Enterprise House from March to December shows that 14,731 (65·7%) persons attended for a pre-employment chest X-ray. Four thousand six hundred and fifty-five (20·7%) came of their own volition. One thousand two hundred and thirty-eight (5·5%) were sent by the Immigration Authorities. One thousand two hundred and three (5·4%) were on request by various consuls and 607 (2·7%) were sent by medical practitioners for routine chest X-ray mainly without clinical history.

Active pulmonary tuberculosis cases during above period among the categories indicated were—Pre-employment, Immigration Authorities and doctor's letter, 1 case each. Two cases among those who attended on their own accord. No case among consulate referrals. Three further active cases were found at Milton House during January–February, all three attended for a pre-employment chest X-ray. Thus public surveys accounted for 8 active cases.

TABLE 8—* DEATHS REPORTED 1977

Age—Years	Male	Female	Total	Percentage
Under 20 .. .. .	..	..	..	..
20-29 .. .. .	..	1	1	1.2
30-39 .. .. .	..	..	..	..
40-49	4	1	5	6.1
50-59	9	3	12	14.6
60-69	14	7	21	25.7
70-79	23	5	28	34.1
80 and over	10	4	14	17.1
Unknown	1	..	1	1.2
Total	61	21	82	100

Average age at death 68.4 years.

* Commonwealth Bureau of Statistics office figure is not available. The above figure is taken from our office records of reported deaths.

TABLE 9—PRIME CAUSE OF DEATH 1977 (LISTED FROM DEATH CERTIFICATES)

Tuberculosis (Associated Active T.B.—9)	..	..	..	..	..	16
Cardio-Vascular .. .. .	..	..	..	..	..	22
Pneumonia .. .. .	..	..	..	..	..	10
Cerebral .. .. .	..	..	..	..	..	3
Neoplasm (4 Pulmonary)	..	..	..	..	..	8
Bronchitis	}	..	..	..	..	11
Emphysema Asthma						
Pulmonary insufficiency						
Renal .. .. .	..	..	..	..	..	3
Wegeners Granulomatosis	..	..	..	..	..	1
Liver Failure .. .. .	..	..	..	..	..	2
Septicaemia .. .. .	..	..	..	..	..	1
Pulmonary Embolism	..	..	..	..	..	1
Other .. .. .	..	..	..	..	..	4
Total .. .. .	..	..	..	..	..	82

TABLE 10—FINDING FROM X-RAY SURVEYS

ACTIVE TUBERCULOSIS :

Public Surveys—

Minimal .. .. .	..	..	..	..	..	..	4
Moderate .. .. .	..	..	..	..	..	..	3
Advanced .. .. .	..	..	..	..	..	..	1
							— 8

Special Surveys—

Minimal .. .. .	..	..	..	..	..	..	2
Moderate .. .. .	..	..	..	..	..	..	1
Advanced .. .. .	..	..	..	..	..	..	2
							— 5

Other large films—

Minimal .. .. .	..	..	..	..	..	..	1
Moderate .. .. .	..	..	..	..	..	..	5
Advanced .. .. .	..	..	..	..	..	..	2
							— 8

INACTIVE PULMONARY TUBERCULOSIS

CARCINOMA AND OTHER NEOPLASMA

SARCOIDOSIS

SILICOSIS

CARDIOVASCULAR ABNORMALITIES

OTHERS

TOTAL	884
---------------	----	----	----	----	----	----	----	-----

TOTAL NO. OF X-RAYS :

Micro film ..	45,461
Large film ..	3,052

Total	48,513
---------------	--------

The 16,340 films taken during special surveys yielded 5 active cases; 2 each from surveys at Ozanam House and 1 case from the survey at Plenty Hospital.

Another 8 active cases were detected from large films, other than micro recall films, such as doctors' referrals, routine yearly re-rays, etc. Carry over from 1976 accounted for another 8 active cases giving a credit for the section of 29 cases of active pulmonary tuberculosis of which notification was received for 24 cases in 1977.

Tuberculin Testing—B.C.G. Vaccination (See Tables 11, 12, 13 and 14).

Tuberculin testing, using C.S.L., P.P.D., has continued in schools with pupils above Grade 6, i.e., 12 years old and above. B.C.G. vaccination is offered to the negative reactors. The present program permits visiting all areas of the State every three years and consent rates for pupils for cards returned were over 95%. In all 87,087 pupils were examined yielding a natural positive reactor rate of 1.6%; 54,860 pupils were vaccinated. Of 28,222 pupils vaccinated in previous years, 85.2% showed positive tuberculin reactions.

Rates for School Children

Age 12 years	17,793 tested	1.2% natural reactors	(1976 : 1.1%)
Age 13 years	18,267 tested	1.4% natural reactors	(1976 : 1.3%)
Age 14 years	17,934 tested	1.5% natural reactors	(1976 : 1.5%)

Post B.C.G. Re-examination

All ages and groups—

(3/12 to 12 + years after vaccination) . . . 2,206 tested 76% + ve
(1976 : 83%)

Contacts and others—

(3/12 after vaccination) . . . 413 tested 50% +ve (1976 : 94%)

All Age Surveys

In addition "all age" surveys of primary school children aged 5–11 years were carried out in three city municipalities—Collingwood, St. Kilda and Sunshine. The consent rate was 96%. Fourteen thousand five hundred and forty-nine pupils were tested and the natural reactor rate was 1.25% (1976 : 0.64%).

Other Groups

Surveys have also been made of various other special groups and here 3,119 were examined.

Summary

The total number of tuberculin tests carried out was 104,755 and 55,469 vaccinations performed. One thousand three hundred and twenty-two natural positive reactors were referred for further assessment. From this group no active cases of tuberculosis were found.

Bacteriology (See Table 15).

Reliable bacteriological support is essential in tuberculosis detection and control. Appreciation is again expressed for the co-operation and help given by the staff of the Tuberculosis Laboratory at Fairfield Hospital.

As in 1976 this year's report does not include isolations from cultures carrying over into 1978.

During the year the laboratory's work resulted in:—

- 14,724 direct smear examinations
- 14,956 cultural examinations
- 154 animal inoculations
- 1,340 sensitivity tests

TABLE 11—TUBERCULIN TESTING 1977

(Mantoux Method 10 I.U. of P.P.D.)

METROPOLITAN AND COUNTRY SCHOOL CHILDREN AGED 4 TO 18 YEARS

Age	Total tested	Total tested less previous B.C.G. positive	Previous B.C.G. positive reactors		Natural Positive reactors	
				%†		%*
4-5	1,313	1,294	19	1.4	11	0.9
6	2,206	2,164	42	1.9	13	0.6
7	2,004	1,942	62	3.1	24	1.2
8	2,065	2,003	62	3.0	24	1.2
9	2,062	1,983	79	3.8	27	1.4
10	2,081	2,009	72	3.5	27	1.3
11	4,810	4,644	166	3.4	54	1.2
12	17,793	17,222	571	3.2	200	1.2
13	18,267	17,417	850	4.6	248	1.4
14	17,934	15,017	2,917	16.3	230	1.5
15	14,512	5,931	8,581	59.1	151	2.5
16	10,682	3,592	7,090	66.4	99	2.7
17	4,961	1,593	3,368	67.9	57	3.6
18	949	291	658	69.3	16	5.5
Total	101,639	77,102	24,537	31.8	1,181	1.5

† Percentage Previous B.C.G. Positive Reactors relates to the total Mantoux tested.

* Percentage Natural Positive Reactors excludes previous B.C.G. Positive Reactors from Total.

TABLE 12—B.C.G. DIVISION, TUBERCULIN TESTING 1977
(Mantoux Method 10 I.U. of P.P.D.)
School Children

Age group—Years	Number tested	Natural positive reactors		Previous B.C.G. positive reactors		Negative	
		No.	%	No.	%	No.	%†
<i>Country</i>							
4-9	23,314	282	1.2	1,604	6.9	20,873	89.5
10-14	12,669	130	2.8	8,049	65.6	1,804	14.2
Totals	35,983	412	1.6	9,653	26.8	22,677	63.1
<i>Metropolitan</i>							
4-9	9,650	99	1.1	264	2.7	9,161	94.9
10-14	37,574	477	1.4	2,972	7.9	33,289	89.0
15-18	18,432	193	2.8	11,648	63.2	3,402	18.4
Totals	65,656	769	1.5	14,878	22.7	45,852	69.8
GRAND TOTAL ..	101,639	1,181	1.5	24,531	24.1	68,529	67.4

MISCELLANEOUS GROUPS
Teachers, Contact Surveys, etc.

All ages	Number tested	Natural positive reactors		Post-B.C.G. positive reactors		Negative	
		No.	%*	No.	%†	No.	%†
Totals	3,119	151	14.00	2,041	65.44	609	19.5

* Percentage Natural Positive Reactors excludes previous B.C.G. Positive Reactors from total.

† Percentage relates to total number tested.

National Service intakes discontinued in 1974.

TABLE 13—TUBERCULIN TESTING AND B.C.G. VACCINATION 1977 : (INCLUDES CLINICS, SPECIAL GROUPS, HOSPITAL STAFF, SCHOOL SURVEYS, ETC.)

Group	Mantoux test No. tested	Positive previous B.C.G.	Natural positive	Vaccinated B.C.G.
<i>Clinics</i>				
Contacts	2,418	990	129	876
Hospital Staff and Allied Groups ..	1,804	1,043	250	601
<i>School Children</i>				
1. B.C.G. Division	101,636	24,537	1,181	62,047
2. Bendigo Schools	1,214	82	11	157
Others	3,756	2,074	231	1,399
Total	110,828	28,726	1,802	65,070

TABLE 14—TUBERCULIN TESTING AFTER B.C.G. VACCINATION 1977
(Contacts, Teachers and Staff)

<i>After B.C.G.</i>					<i>No. tested</i>	<i>No. positive</i>	<i>Percentage</i>
3 months	..	..	..	..	413	205	49.6
1 year	..	..	..	..	241	52	21.5
2 years	..	..	..	..	205	185	90.2
3 years	..	..	..	..	144	135	93.7
4 years	..	..	..	..	237	210	88.6
5 years	..	..	..	..	136	120	88.2
6 years	..	..	..	..	139	108	77.6
7 years	..	..	..	..	134	102	76.1
8 years	..	..	..	..	136	116	85.3
9 years	..	..	..	..	84	72	85.7
10 years	..	..	..	..	86	72	83.7
11 years	..	..	..	..	66	54	81.8
12 + years	..	..	..	..	185	145	78.3
Total	..	..	..	..	2,206	1,673	75.8

TABLE 15—BACTERIOLOGY LABORATORY 1977

1. EXAMINATIONS

	1974	1975	1976	1977
Direct Smears	15,449	14,814	15,976	14,724
Cultures	16,004	15,290	16,093	14,956
Animal Inoculations	72	140	146	154
Sensitivity Tests	2,136	2,021	2,098	1,340

2. ANALYSIS OF FINDINGS

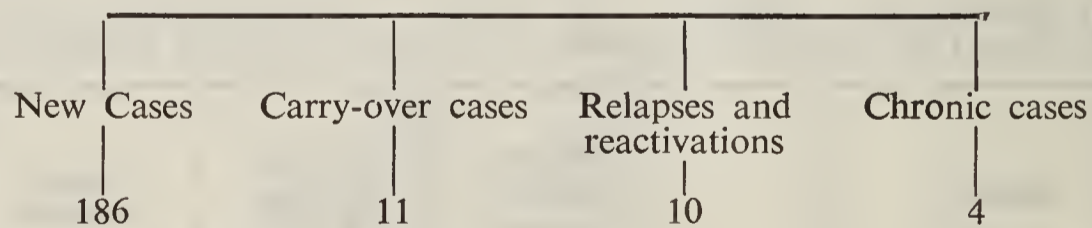
Acid-fast bacilli were detected from 262 patients.

A. *Smear only*

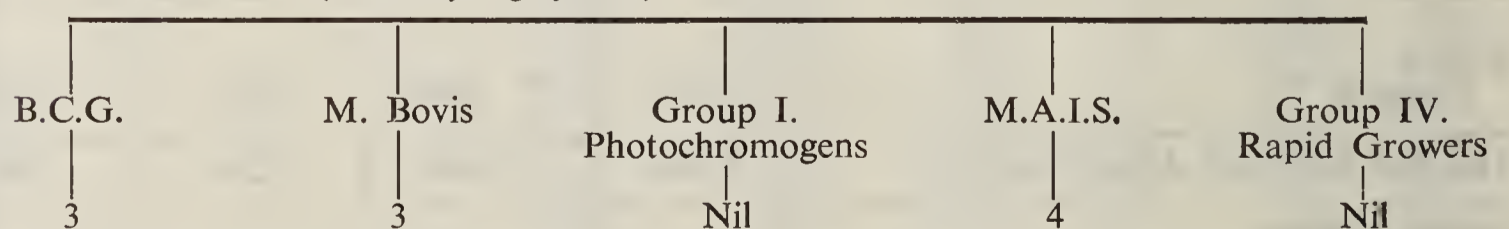
Probably <i>M. Leprae</i>	..	..	..	..	4
Probably Non-Pathogenic Mycobacteria	..	..	..	..	1

B. *Culture*

<i>M. Tuberculosis</i>	211
------------------------	----	----	----	----	-----



C. *Other isolations (Probably significant)*



D. *Probably not significant*

Group I. Photochromogens	..	..
Group II. Scotochromogens	..	7
Group III. Non-Chromogens	..	24
Group IV. Rapid Growers	..	1

E. <i>Unclassified</i>	4
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TABLE 16—SUMMARY OF ADMISSIONS, DISCHARGES, DEATHS : 1977
Metropolitan Hospital and Country Chalets

<i>Hospitals and Chalets</i>	<i>Admissions</i>		<i>Discharges</i>		<i>Deaths</i>	
	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>
Heatherton	179	86	168	83	11	2
Austin	59	25	49	33	10	2
Mental Hospital—Mont Park	6	1	4	1	..	..
Country Chalets	45	20	39	13	2	2
Total	289	132	260	130	23	6
			<i>Admissions Male and Female</i>		<i>Discharges Male and Female</i>	
<i>Repatriation Department</i>			52		19	

Patients Average Length of Stay :

Heatherton Hospital	102 days
Austin Hospital	34 days
Country Chalets	65 days

TABLE 17—METROPOLITAN AND COUNTRY BUREAUX ACTIVITIES : 1977

	<i>Attendances</i>	<i>X-Ray films</i>	<i>Mantoux tests</i>	<i>B.C.G. vaccination</i>
Central	19,911	13,057	3,393	896
Prahran	7,793	6,529	756	102
Northern Suburbs	14,829	11,130	1,460	331
Bendigo	1,311	1,049	208	29
Ballarat	2,352	828	832	130
Geelong	4,385	4,414	250	39
Special Country Clinics	384	371	13	37
Total	50,965	37,378	6,917	1,564

TABLE 18—ATTENDANCES AT CHEST CLINICS
METROPOLITAN AND COUNTRY CHEST CLINICS
Statistics for year ended 31st December, 1977

	Male	Female	Under 14		Total
			Male	Female	
<i>Attendances at Clinics</i>					
<i>Doctor Referrals</i>					
New Applicants Investigated	1,927	2,648	368	352	5,295
Re-Attenders	10,044	10,159	584	522	21,309
	11,971	12,807	952	874	26,604
<i>Contacts</i>					
New Contacts	878	924	493	432	2,727
Contact Re-Attenders	4,217	5,090	2,244	2,177	13,728
	5,095	6,014	2,737	2,609	16,455
<i>Public Sessions</i>					
Coburg, Prahran, Geelong	2,225	2,763	6	4	4,998
<i>Grand Total of Attendances</i> (including 3,703 attendances at Evening Clinics)					
	19,291	21,584	3,695	3,487	48,057
<i>No. of cases of Tuberculosis discovered</i>					
Contacts .. .. .	..	..	..	..	22
Other .. .. .	..	..	..	..	170
Reactivations .. .. .	..	..	..	..	27
	..	..	..	..	219
<i>Skin Tests (excludes routine tests in schools and similar groups)</i>					
No. of Mantoux Tests	1,541	2,410	1,516	1,437	6,904
No. of B.C.G. Vaccinations	192	428	470	429	1,519
	1,733	2,838	1,986	1,866	8,423
<i>X-ray Examinations</i>					
Large films .. .. .	..	..	..	..	16,049
100 mm films .. .. .	..	..	..	..	9,114
70 mm films .. .. .	..	..	..	..	11,844
	..	..	..	..	37,007
<i>Home Visits</i>					
Nurses first home interviews .. .. .	..	..	..	..	472
Nurses re-visits .. .. .	..	..	..	..	6,350
Nurses visits where no one home .. .. .	..	..	..	..	2,059
Rural visits .. .. .	..	..	..	..	4,115
	..	..	..	..	12,996
<i>No. of Patients commenced Chemoprophylaxis</i>					
1. Tuberculin reactors .. .. .	..	..	..	..	207
2. Cases of doubtful activity .. .. .	..	..	..	..	19
	..	..	..	..	226

In addition to the routine work from the Tuberculosis Branch the laboratory is a reference laboratory for tuberculosis bacteriology. A large number of isolations from laboratories throughout Victoria and Tasmania were received for identification of isolates and sensitivity testing. A total of 19 patients from Tasmania had isolations examined.

Excluding Repatriation and Tasmanian patients isolations of tubercle bacilli were made from 211 patients of whom 186 were new cases, 11 were "carry over" from the end of 1976, 10 were from re-activated cases, and 4 were from persons with chronically active tuberculosis.

Sensitivity tests against streptomycin, isoniazid, ethambutol and rifampicin were carried out on all positive isolations from new patients and patients with re-activated disease. No cases of primary resistance to ethambutol or rifampicin were detected.

Primary Resistance

There were 9 cases of primary resistance detected. Six were from migrants 3 of whom had resistance to more than 1 drug. Only 1 native-born Australian showed primary resistance to more than one drug. In the past 14 years there have been 138 cases of primary resistance detected and 99 of these persons were born outside Australia.

Resistance after Chemotherapy

Four patients previously treated with chemotherapy showed resistance to one or more drugs.

Bovine type

Three isolations were identified (1 male and 2 females). One female suffered from pulmonary disease and one male and one female each suffered genito-urinary disease.

Treatment

Anti-tuberculosis chemotherapy throughout the State is now almost entirely confined to the use of isoniazid, rifampicin, streptomycin and ethambutol. Relapses are greatly reduced and the average length of stay in hospital remains close to 100 days.

In line with changes elsewhere our policy is to reduce the previous long period of treatment (two years or more) for some patients but not to reduce therapy to less than one year after negative bacteriology results have been confirmed.

The major problem remains, as always, to ensure that each patient takes every dose ordered for the full period. It can be stated again "the most difficult part of management is most certainly due now to social and personality problems and not due to actual methods of medical treatment".

Chemoprophylaxis

Two hundred and twenty-six persons commenced courses of chemotherapy as a prophylactic measure against tuberculosis. These were mainly young people who were known to have had recent contact with an open case of tuberculosis or school children with large tuberculin reactions.

Institutions

The beds reserved in Victoria for tuberculosis are recorded as 197, excluding 23 at the Repatriation Department, but many are in use for other purposes. Usually there are about 100 beds occupied by tuberculosis patients at any one time.

At Heatherton Hospital, total 259 beds, 129 beds have been released for other purposes—44 beds are available to Prince Henry's Hospital and 85 to the Alcohol and Drug Dependent Persons Services Branch. About 60–70 have usually been occupied for tuberculosis.

The Austin Hospital continues to provide for Departmental patients requiring specialised treatment for extra-pulmonary and pulmonary tuberculosis and for special investigation. This unit is being shared as a chest unit for non-departmental patients.

In the country, facilities continue to be provided at base hospitals for the care of uncomplicated tuberculosis patients. The treatment at these centres is in the care of local medical practitioners employed by the Department on a part-time basis. At five of the ten base hospitals the daily bed occupancy for tuberculosis patients for the year has been "one or less than one".

The Mental Health Authority treats all their patients with known or suspected tuberculosis in a special ward in Mont Park Hospital and facilities are provided at the Royal Women's Hospital for midwifery in tuberculosis women as the need arises.

Heatherton Hospital Laboratory

The work during the year for in-patients and out-patients included:—

- 4,584 Hæmatology investigations
- 4,676 Biochemistry investigations
- 137 Serology investigations
- 1,206 Microbiology investigations
- 209 Audiograms investigations
- 527 Regular visual testing
- 126 Isoniazide phenotyping
- 335 Sputum induction, nebuliser, F.C.C., etc.
- 356 E.C.G's
- 438 Other activities

The work load reached saturation point and during the year an extra medical technologist was appointed. Appreciation is expressed to the staff who have been most co-operative and helpful.

Bureaux and Clinics (See Tables 17 and 18)

The policy to rationalise the prolonged surveillance of certain groups at chest clinics has probably stabilised, only a small drop is recorded in attendance—48,057 in 1977, compared with 52,130 during 1976. Routine B.C.G. vaccination of aboriginal children as early in life as possible is proceeding throughout the rural areas of the State.

Central Chest Clinic

The Central Chest Clinic continues to bear the greatest load, the total attendance was just under 20,000 over 13,000 X-rays were carried out. One hundred and fifty-three active cases were reported in the areas served by this clinic including country areas not served by the country Bureaux.

Prahran Chest Clinic

The Prahran Chest Clinic now serves a population of approximately 446,384. There were 7,793 attendances during the year including 1,192 at public X-ray sessions.

During the year 12 cases of active pulmonary tuberculosis were discovered and 3 old cases attending the clinic for observation were detected to be suffering from re-activated disease. In addition, 23 new cases were reported by outside sources, making a total of 35 newly discovered cases and 3 re-activations in areas served by the Clinic.

Northern Suburbs Chest Clinic

The estimated population served by the Northern Suburbs Chest Clinic is 494,500. Attendances recorded were 14,829 including 2,512 at public X-ray sessions. Seventeen new cases were discovered, and 2 with reactivation. In addition there were 37 new notifications from other sources in the area.

Country Clinics

The country clinics with Bureaux at Ballarat, Bendigo and Geelong continue satisfactorily. The attendances at Ballarat were recorded at 2,352 during the year and 4 new active cases of tuberculosis were discovered. At Bendigo attendances were 1,311. Dr. Hardman reported 9 cases of active tuberculosis, including 3 reactivations for the Northern Health Area. This figure is more than double the number located in 1976. At Geelong there were 4,385 attendances recorded, including 1,287 at public sessions. Six active cases of tuberculosis were located.

Out-patient clinics are also conducted in association with the treatment centres at seven other Base Hospitals. Special clinics continue periodically at Traralgon, Moe, Wonthaggi, Swan Hill, Robinvale and Bairnsdale, conducted by Departmental medical officers. Three hundred and ninety-eight persons attended.

Appreciation is extended to all the part-time medical practitioners who accept responsibility for tuberculosis control and care of patients in these country areas.

Visiting Nurses

The liaison work carried out between patients and medical officers by the visiting nurses continues to contribute a very important part in the Victorian tuberculosis service, both in the country and city areas. Visiting nurses carried out 6,350 home visits and the logs of the cars used in the country showed that 295,672 km. were covered in the performance of their duties. The routine contact survey work and seeking out and persuading those reluctant to attend for medical review are ever necessary.

The visiting nurses are continuing to bear increasing responsibility in patient supervision, especially for patients taking chemotherapy. With an increasing proportion of patients with active tuberculosis being reported from private practitioners and public hospitals the visiting nurse at times is the only direct contact the Branch has with these patients to bring to attention facilities or benefits available to them through Department resources, such as supply of drugs, contact surveillance, tuberculosis allowance, etc.

Legal Powers

The provisions of the Health Act have not been required this year to have persons with tuberculosis attend for examinations or to be admitted to hospital.

Social Welfare

Social welfare this year followed a similar pattern to 1976, the help given involving 182 new patients and 91 old patients, most of them requiring continuing support. Financial assistance continues to be the greatest problem and appreciation is acknowledged for the help received from the Department of Social Security and the Victorian Tuberculosis Association.

Requests for placement on discharge from Heatherton for elderly and the "homeless" have continued. This area is becoming increasingly difficult due to lack of Nursing Homes and Government Geriatric Homes.

The Housing Commission has granted assistance to two families referred to them for priority on medical and social grounds.

There was a greater demand for clothing from the store, particularly for men and children. Petty cash provided through the Victorian Tuberculosis Association was used for immediate assistance in many areas, especially in providing necessary clothing for young children on admission to Heatherton, where these costs would have strained family finances, or for children where family support was inadequate.

Crochet rugs supplied by the Camberwell Country Women's Association were in demand throughout the winter. These rugs were greatly appreciated for warmth and colourfulness of design.

"The Sun Toy Fund" provided a wide range of toys for all ages for distribution to our families in need. And as usual, the Victorian Tuberculosis Association has continued to be sympathetic in the most practical way to all our requests for help in all ways—finance to meet emergency debts, grants in aid, food orders and occasionally shelter, floor coverings, Lord Mayor's Camp at Portsea for children and Christmas food vouchers.

Grant in Aid—\$50.00—was contributed to the cost of a surgical brace for an elderly patient.

To all these organisations, and other individuals who have assisted in making life a little easier or happier for many of our poorer families, appreciation is expressed.

Conferences

Medical conferences continued during the year. These stimulate contact and liaison between medical staff of the Branch and the main teaching hospitals and enable our medical staff to see and discuss clinical work proceeding outside our own services. At the same time the tuberculosis programme and situation can be brought to the attention of various medical officers of teaching hospitals. A one-day seminar for visiting nurses and medical officers of the Branch was arranged to discuss various aspects of tuberculosis. These meetings are most stimulating and it is intended to continue them annually.

Training

Medical students continued to attend Geelong Chest Clinic for instruction. Regretfully, medical student training at Heatherton has virtually ceased. A number of post-graduate courses in different fields of nursing include visits to our metropolitan institutions and clinics or include part of their training from our staff.

For non-English-speaking patients, classes in English language have been conducted at Heatherton and give good basic training. The classes were very much appreciated. In addition, schooling has been available for child patients.

Induction training has commenced on more formal lines for new nurses recruited by the Branch with a result that these nurses feel more confident when they have to assume responsibility on their own.

POLIOMYELITIS AND ALLIED DISEASES

Incidence of Poliomyelitis

One case occurred in the year under review, a Turkish girl of three months who was born overseas in Europe and on arrival in Australia was showing signs of the disease.

No immunisation had been received by the mother or child prior to the illness.

Distribution of Sabin Vaccine (Oral)

A total of 777,710 doses were issued during the year, taking the total distribution throughout Victoria to 8,514,180.

After-Care Treatment

The Division provides orthopædic supervision and physiotherapy services to those patients who have suffered an attack of poliomyelitis or polyneuritis or who have multiple sclerosis.

Patients who have suffered in past epidemics of poliomyelitis are still being seen for the first time including some from other States or overseas.

Financial assistance is granted where it is needed in the provision of splints and appliances. Those patients in receipt of a pension or Social Security benefits receive their equipment without charge.

Clinics are held throughout the metropolitan area and in most country districts. Patients are also seen at Fairfield Hospital or at the Commission's Head Office (Enterprise House). Those who cannot attend these centres are seen in their homes or at a treatment centre in the neighbourhood. These are mainly multiple sclerosis patients needing regular treatment.

The additional referrals in the last year were:—

Poliomyelitis	31
Multiple Sclerosis	11
Miscellaneous	5

Another activity of the Division is physiotherapy staff continue to provide assistance to some Mental Health Authority Centres, including Janefield Special School, Bundoora, and Sunbury Training Centre.

In association with the Sisters-in-Charge of Infant Welfare Centres, the Divisional staff conducted ante-natal treatment clinics in many suburbs.

Physiotherapy staff continue to treat children accommodated in the Allambie Reception Centre of the Social Welfare Department. Where needed, treatment is continued after the children are discharged from this Centre.

Work has continued in the field of developmental problems in children. Children classified as being in the specific learning difficulties group are referred from the School Medical Service and other groups for assistance.

Regionalisation of Physiotherapy Services is being continued where possible, and particularly in the country areas, so that a greater range of service is possible to each area.

IMMUNISATION MATERIAL ISSUED TO MUNICIPALITIES 1977/78

(with figures for 1976-77 for comparison)

<i>Material</i>	<i>Number of Doses</i>	
	1977-78	1976-77
Sabin Vaccine	777,710	539,720
Measles Vaccine	76,450	79,438
Rubella Vaccine	106,810	54,577
Triple Antigen	250,090	239,105
A.D.T.	50,075	63,647
Combined Diphtheria Tetanus Prophylactic (C.D.T.) ..	119,507	99,836
Purified Tetanus Toxoid (A.P.A.)	13,384	18,911
Smallpox Vaccination	7,518	17,830
Diphtheria Prophylactic (P.T.A.P.)	420	1,260

MICROBIOLOGICAL DIAGNOSTIC UNIT

*Enteric Organisms**(a) Typhoid*

There are times when workers in the field of public health are reminded of the holistic nature of their speciality which encompasses both history and geography. Such an occasion occurred when a middle-aged woman who had been in the Women's Royal Air Force in England as a teenager during the Second World War and had met her husband in the service, took up employment at a sandwich bar at a shopping centre in the eastern suburbs of Melbourne. In the intervening years she, and the rest of the family, were involved in one of the first of the notorious series of typhoid outbreaks associated with imported corned beef—a series that only culminated in Aberdeen in 1964. Her war-time doses of typhoid vaccine did not protect her from overt disease and she became, in 1949, one of the early cases of typhoid to be people treated with chloramphenicol. There is suggestive evidence that she was discharged from hospital still excreting *Salmonella typhi* despite two courses of antibiotic.

During a career of work in catering establishments both at air force and commercial establishments in Victoria, South Australia and New Zealand spanning years, there is little or no evidence of her transmitting typhoid to others.

Following her latest employment in April, 1977, two cases of typhoid were admitted to Fairfield Hospital within days of each other and, as they had been infected with strains of the same phage-type (E_1), had not been abroad and did not know each other, hospital staff instigated a careful check which revealed that eating from the sandwich bar in question was the only factor the patients had in common.

While further cases were diagnosed the sandwich bar was inspected, foodstuffs taken and tested, the staff bled and faecal specimens requested. The serological tests indicated the likely source of the epidemic within hours of the receipt of specimens and isolation and phage-typing of *Sal. typhi* soon confirmed the suspicion. During the month of May the Unit was heavily involved in phage-typing isolates, carrying out Widal and Vi serology, and examining faecal specimens from people who had eaten food from the relevant shop or had been in contact with proven cases.

In addition to the carrier, two other food handlers who acquired typhoid, two secondary cases in children and two further primary cases were revealed by this programme of community surveillance which included performing clot cultures on all blood samples submitted for serology.

A total of 36 cases of typhoid stemmed from this outbreak.

While this Eastland incident can reasonably be said to have been closed, the case of a 6-year-old girl of Sri Lankan origin and who was diagnosed as typhoid in September after an appendectomy was less satisfactory as the source was never found. While the infecting strain was also phage-type E_1 there was no known connection with the big outbreak earlier in the year and repeated investigations of family and contacts yielded a blank. Consideration of this outbreak was complicated by the facts that visitors from abroad, who had been entertained by the family, had already returned to the Persian Gulf, that some of the contacts admitted to suffering from typhoid a decade or so earlier and another contact promptly administered typhoid vaccine to himself and his family on receipt of the news.

The way in which typhoid can surprise was shown by the isolation, in March, of a D_1 strain *Sal. typhi* from the urine of a 7-year-old boy at the Royal Children's Hospital with symptoms of a urinary tract infection.

Later in the year another boy, 9 years old this time, returned from a trip to Turkey and presented with typhoid (degraded D_1) a week later.

Further isolations were made from three known carriers.

A total of 142 cultures of *Salmonella typhi* were phage-typed during the year. Eighty-four cultures—mostly stemming from the large outbreak—came from Victoria, 33 from other States and 45 from abroad.

(b) *Paratyphoid*

Forty cultures of *Salmonella paratyphi B* were phage-typed. Thirty of these were isolated in Victoria. Four different phage-types were included in the total but most of the strains (24) were type Taunton. Two patients, both of whom presented after travel in Asia, were diagnosed in Victoria but most of the strains received came from sewage and were isolated in the course of surveys into the survival of salmonellas during treatment of sewage in lagoons.

Two cases of paratyphoid due to *Salmonella paratyphi A* occurred in Victoria during the year—both patients had recently returned from Asia. Cultures from three cases were sent from New South Wales. While two of these patients had recently been abroad the third had not. He was a young man from Albury with a history of visiting Melbourne but who had not had any known contact with a case. These sporadic cases with no identified source demonstrate the continuing potential problem.

(c) *Other Salmonellas*

The year witnessed a vast increase in the number of cultures of *Salmonella* spp. submitted for serotyping or isolated in the Unit. In all, they amounted to 1486 strains of 59 different serotypes. A whole series of factors contributed to this increase. One was the investigations of abattoir effluent and sewage to which some allusion has been made before. Analysis of these findings has demonstrated, once again, the relation between isolates from sewage and human disease. Monitoring of sewage can yield useful information about serotypes which may be about to manifest in overt cases. Other incidents, however, were more directly related to human disease.

The most important concerned *Salmonella bredeney* and demonstrated the advantages of a system of regional reporting of salmonellas. This serotype has been relatively uncommon in past years—4 cases were noted through 1976. However 5 isolations were made in February, 2 in March and 8 in April. Although these numbers were insignificant compared to the numbers of other serotypes encountered, the fact that most isolates were from very young children was worrying. It was also noted that the cases were distributed across the State. At the end of April the Health Department was warned of the suspicious circumstances but the typhoid outbreak occurred just at this time and distracted attention until control of the typhoid was established. The occurrence of further cases of infection with *Sal. bredeney* in young children during the typhoid investigations stimulated investigations as soon as possible and Health Department officers discovered the connection between many of the cases and certain brands of infant formula and, in turn, the relation of these brands to the Nestles plant at Tongala. In the course of this outbreak 55 isolations were made from children up to 3 years of age—most less than six months old—as well as from 14 adults and older children.

Even while the work on this major investigation was proceeding, a report that students who were taking part in a nutritional experiment had developed diarrhoea when fed calcium caseinate led to another major incident. Some students were excreting *Salmonella adelaide* and this was found in the bag of caseinate

from which their diet had come. It emerged that calcium caseinate was used extensively for invalid and tube feeds and in biscuits and pharmaceuticals without relevant heat processing. The ramifications were wide. As investigations developed so successive dairy plants were found to be contaminated by *Salmonella* spp. and a range of unsatisfactory practices in these plants in regard to water supply, plant hygiene etc. were uncovered by Health Department officers. All these investigations added to the Unit's workload and strains flowed in for serotyping from the laboratories of the Department of Agriculture as well.

In November egg pulp, imported from New South Wales, was found to contain *Salmonella* havana and this product had contaminated certain premises as well. Imported seer fish, cocoa husk powder, coconut and cockatoo food all contributed to the variety of sources of salmonellas in 1977.

While *Salmonella* typhimurium remains the commonest serotype encountered (48%) *Salmonella* bredeney came into second place (13%). Several serotypes new to the unit were found—*Salmonella* krefeld, *Salmonella* poona, *Salmonella* lille, *Salmonella* ipswich, *Salmonella* kirkee and *Salmonella* carmel.

Phage-typing of *Salmonella* typhimurium proceeded at a quickened pace with 526 strains from Victoria and 115 from interstate being dealt with. The ampicillin-resistant phage type 179 is becoming common in humans and there is evidence of its connection with poultry—but one fair-sized outbreak of food-poisoning, in which curried chicken was the vehicle, was caused by a type 12 strain.

(d) *Shigellas*

Fewer strains of *Shigella* spp. were received or isolated in the Unit than in previous years. From Victoria came 85 strains, 38 from Queensland and one from New South Wales. Thirty strains of *Shigella* sonnei were referred from South Australia for colicine-typing only.

Shigella sonnei was, as usual, the commonest species but despite the smaller number of strains a wide range of other species were identified.

Two cases of dysentery due to *Shigella* dysenteriae I were admitted to Fairfield. Both patients had been travelling in Asia and the isolates of both were multiple-resistant to antibiotics, a characteristic finding in Asian strains of this dangerous pathogen.

Colicine-typing of *Shigella* sonnei revealed the high proportion of type O we have come to expect.

(e) *Enteropathogenic Escherichia coli*

For some years it has seemed that several international centres no longer believed that certain serotypes of *E. coli* could cause gastro-intestinal disease in young children as they felt that any enteropathic effect was associated with the production of demonstrable toxin production. Recent work in Canada and U.S.A. however, has confirmed the long-held British belief that strains of "enteropathogenic" serotypes can be relevant, despite the fact that the way in which these strains produce their effect is not understood.

In 1977, 50 strains of the "enteropathogenic" serotypes were identified but most were from sporadic cases. One incident involving a set of quadruplets occurred at the Royal Women's Hospital. From these children an ampicillin-resistant *E. coli* O111 B4 was isolated. This strain was shown (courtesy Dr. R. Luke, La Trobe University) to produce a heat-stable enterotoxin.

Parasitology

The numbers of specimens examined for the presence of protozoal and helminth parasites increased again in 1977. This is mainly due to the programme of screening immigrants from South-East Asian refugee camps. The tendency, noted the previous year, for these people to be fairly frequently infected, but not to have heavy worm loads, has continued. Because of the work involved (795 specimens) a simplified procedure has had to be adopted although this is less than satisfactory. The remaining 396 specimens covered a wide range of objects, specimens and sources ranging from thick films of blood to be examined for malaria parasites to mites and various pseudoparasites.

The separately-funded survey for the Department of Water Resources on the prevalence of helminthiasis was terminated according to schedule during the year. The very substantial prevalence of taeniasis among the Lebanese community was confirmed. Some evidence emerged that occasional cases of taeniasis in this group were acquired in Australia—which lends point to the recent demonstration by Rickard and Arundel of the imperfections of current meat inspection. Giardiasis was prevalent among the population of Australian origin and was extremely common among the young children admitted to Allambie Reception Centre. Infections with *Entamoeba histolytica* were not encountered but the scheme of investigation was not designed to detect these. While significant results were achieved, the number of specimens received and, therefore, examined was disappointing and not up to the numbers expected from early estimates.

Investigations of the serology of taeniasis continued with a further B.Sc. (Hons.) project being devoted to this. Work centred on the examination of extracts of taeniasis in an attempt to find “significant” and specific antigens. This was not wholly successful. The extracted antigens appeared to be glycoproteins.

Food

The nature of the events of major public health importance of the year made a great increase in the numbers of specimens of food and of food components and raw materials inevitable. Investigations in relation to the outbreak of *Salmonella bredeney* infections associated with contaminated infant milk formula involved the examination of 1103 specimens. The discovery of *Salmonella adelaide* in calcium caseinate led to the examination of invalid foods, pharmaceutical products, and slimming biscuits in an ever-widening circle. In all, 813 specimens were tested.

When the source of original contamination was traced to factories which processed milk into a range of products, Health Department officers collected numerous specimens to assess the source and nature of contamination with salmonellas. Much of this work was later taken over by Department of Agriculture laboratories for long-term surveillance but during the height of investigation 623 specimens were examined.

Many of these specimens were bulky in nature and variable in their pH and solubility. The degree of contamination was often slight and pre-enrichment of substantial masses of material was necessary. The absence of suitable glassware capable of handling large volumes led to searches for used half-gallon wine flagons which were cleaned, sterilised and brought into use—despite the rather unsatisfactory quality of the glass, which resulted in a number of breaks in the autoclave.

It was discovered, *inter alia*, that the standard methods recommended for the examination of many dairy products were inadequate and led to inferior rates of isolation. The substantial amounts of contaminated product which were available rendered a quality assurance experiment to be carried out in which aliquots were distributed for testing to laboratories around the country.

The major *Salmonella bredeney* and *Salmonella adelaide* outbreaks are included in the ten substantial outbreaks of food associated disease which came to the Unit's notice. In addition, there were 63 minor incidents in which only a few people were reported affected. Incidents in which food spoilage was indicated totalled a further 43. In all, these various extra problems entailed the examination of 707 further specimens.

Moulds on chilled or frozen meat involved, in one incident, a visit to an ice works at Croydon to investigate and, in another, court appearances in a Gippsland centre when a seizure of the meat was contested.

A bakehouse was investigated at the request of officers of the Hawthorn City Council and specimens were taken for examination. The results of the health inspector's observations and of bacteriological tests led to a successful prosecution. The same council became concerned about the effects of sawdust upon the floors of butchers' shops. Various premises were inspected and specimens of sawdust and from the environment of the meat were taken for testing. There was evidence that even "clean" sawdust had very high bacterial counts and that the use of sawdust was associated with unduly high numbers of bacteria around meat on display. It is possible that these circumstances might lead to diminished shelf life of certain products.

Further visits were made to firms with problems with food hygiene and officers of the Melbourne City Council were assisted in fairly extensive inspection of machines for vending fresh orange juice in a number of establishments and the quality of product and the efficacy of cleaning regimes were monitored. In a separate series of investigations numerous samples of scallops and prawns were examined in an attempt to improve the standards of a commercial processed product.

A consignment of cocoa husk powder imported from Europe sparked off a further investigation because salmonellas were found during a routine screening test and the product proved to be of quite inferior quality. The salmonella-contaminated egg pulp from New South Wales had been widely disseminated and this incident also involved numbers of specimens being tested.

Brucellosis

Increasing concern over an apparently excessive number of cases of brucellosis at two abattoirs caused the Health Department to institute investigations in collaboration with the Department of Agriculture. Virtually all the employees were bled (some 800 individuals) and tested for antibody to *Brucella abortus* by an agglutination and a modified anti-globulin technique. Rapid processing of these large numbers of sera was made possible because Mrs. Beaton (Senior Technical Officer) had previously developed a microtitre technique shortly before the need arose. The serological investigation was accompanied by an extensive questionnaire filled in by all employees. This inquired into the past and current work experience and the history of illness. The questionnaire was designed in computer-compatible form and analysis of the information—epidemiological, clinical and serological—was greatly expedited by use of the Melbourne University's computer.

Mycology

The work in this section increased substantially during the year with 228 cultures and 78 specimens of pathological material being referred to the mycologist. Eighty-four dermatophytes were among the fungi identified. *Trichophyton rubrum* and *Microsporum canis* continued their dominance in terms of frequent isolation with *Trichophyton mentagrophytes* and *Epidermophyton floccosum* following up. *T. violaceum* came from the arm of a child. *T. erinacei* is common in New Zealand but was identified here for the first time—having been isolated at St. Andrew's Hospital from a patient who had acquired the infection while visiting New Zealand.

Numerous saprophytic fungi were sent as isolates from various sites but *Aspergillus niger* from two cases of ear infection, *Asp. nidulans* from (post-mortem) bronchial washings and *Asp. flavus* and *Asp. terreus* from spoiled olives. *Penicillium citrinum* was isolated from a defective batch of erythromycin suspension and other *Penicillium* sp. from a solution from a hospital pharmacy. *Cladosporium herbarum* isolates from the homes of asthma patients were also identified.

After a somewhat prolonged period of development the classic system of identification of yeasts has been brought into operation as a result of demand. A number of interesting isolations have been identified including *Candida parapsilopsis* from a blood culture from an infant, *Torulopsis glabrata* from a patient's spleen and liver (post mortem) and both *Cryptococcus neoformans* and *Crypt. albidus* from another patient.

Bacterial Reference

Quite apart from the *Neisseria* spp. sent to the laboratory for identification and tests for antibiotic sensitivity, 235 cultures of bacteria were received. These included substantial numbers of non-fermentative Gram-negative rods, fastidious Gram-negative bacilli (e.g. *Eikenella corrodens*, *Moraxella* spp.), atypical fermentative Gram-negative rods and obligate anaerobes.

For the last, the use of the gas-liquid chromatograph for identification by analysis of volatile products of glucose fermentation has been developed. A special effort is now being put into the improvement of identification of *Nocardia*, *Streptomyces* and similar genera.

Two particularly unusual organisms identified were C.D.C. Group EF-4—from an infected dog bite—and *Pseudomonas paucimobilis*—from an ulcer on a leg.

Dr. Peel continued development of the *Neisseria meningitidis* serotyping alluded to in the previous report. Antisera have been raised to groups A, B, C, D, E, X, Y, Z, 29E and W135 and the co-agglutination method of reacting with various isolates has been used. In addition, all isolates of B-haemolytic streptococci are now being grouped by the improved methods used at the Central Public Health Laboratory, Colindale, which is uncovering numerous examples of acute infections with Group G streptococci not previously identified.

General

The work on genital chlamydias (associated with, but financially independent from the M.D.U.) continued in 1977. Mr. Ng developed a method of detecting antibody to genital strains of *Chlamydia trachomatis* in secretions. Application

of this has yielded interesting results but we have insufficient data to determine the relation of these antibodies to the course of infection and further work is needed to define this. It seems, however, that antibody is found only after infection has been established for some time.

The project, suggested by Professor Benenson and performed in conjunction with the Commonwealth Serum Laboratories, to assess the efficacy of the 2 Lf dose of diphtheria toxoid is continuing. Progress is slow as few of the adult subjects found to be Schick-positive have not received immunological priming previously.

Again this year the Unit assisted with the Microbiology Survey run by the Royal College of Pathologists of Australia—providing scores of cultures of a Gram-negative rod for identification and aliquots of formalinized faeces and fixed smears of faeces for parasitological examination. The answers were also analysed.

Mrs. Beaton and Mrs. Davies attended a short course on programming in FORTRAN at the University's Computer Centre. This introduction has enabled the Unit to consider using computerised data processing to handle the storage and analysis of information—such as exemplified above. The Unit has a particular need of this to be able to analyse and retrieve epidemiological information much more effectively than is currently possible and the possibilities are being further explored.

In January the Assistant Director read a paper at the first Western Pacific and S.E. Asian Regional Conference on Sexually Transmitted Diseases in Singapore, addressed the Victorian Branch of the Australian Society for Microbiology, the ANZAAS Conference in Melbourne, the meeting of the Medical Officers of Health at Fairfield, the Conference of the Royal College of Pathologists of Australia and the courses on Food Hygiene run by the Australian Institute for Food Science and Technology and the Australian Confectionery Institute, and sat on a project formulation panel for the Australian Water Resources Council and an Advisory Group for the formulation of codes of practice for the handling of Micro-organisms. In July and November, he studied the administration and arrangement of clinics for sexually-transmitted diseases in Adelaide and Perth and reported to the Health Department. He was appointed Director during the year.

Dr. Margaret Peel presented a paper at the workshop on nutrition and immunity at the International Immunology Conference in Sydney and Miss Taplin spoke on typhoid and imported enteric diseases to a meeting of Senior Microbiologists of the Commonwealth Health Laboratories meeting in Bendigo and to the First Australian Food Microbiology Conference in Sydney.

Dr Maureen Hutchison was appointed, provisionally, to the Unit as food bacteriologist from July 1977 although she had already been directing and assisting in the examination of foods and of food processing and distributing establishments. She taught at the course for food-handlers organised by the Microbiology Group of the Australian Institute for Food Science and Technology, addressed the conference of the Victorian Division of the Institute of Health Surveyors and read a paper at the First Australian Food Microbiology Conference in Sydney. Also, she was invited to the DS/3 and AG/7 Committees of the Standards Association of Australia in Sydney.

At the Annual Scientific Meeting of the Australian Society for Microbiology in Melbourne in May, members of the Unit read four papers, the Assistant Director convened a workshop on diagnostic parasitology, and Mrs. Maslen one on diagnostic mycology.

It is gratifying to note that the increasing involvement of staff from the Unit in field visits and investigations with officers of State and Municipal Health Departments continued during the year.

This year marked the 80th anniversary of the founding of the public health laboratory in the University of Melbourne. It also was a year of unprecedented activity. The number of specimens received at the laboratory in the year exceeded 30,000 for the first time since the mycobacteria and syphilis serology sections were split away in 1959. Since that time the number of specimens processed has more than doubled and it is more than probable that the average amount of work put into each has vastly increased also.

The tendency for the Unit to act as a State reference centre for the identification of difficult organisms in some areas continues and this must be felt to be a reasonable rationalization of effort—particularly in the straitened economic circumstances of the times.

The Unit can look back on the year with the knowledge of having striven well to fulfil its purpose of serving public health in Victoria.

ANNUAL EXAMINATIONS

A Comparison of Numbers for the Calendar Years 1976 and 1977

<i>Examinations</i>	1976	1977
1. Upper Respiratory Tract Infections—		
(a) Diphtheria—		
(i) Cultural examinations	895	1,445
(ii) Isolations and identifications	1	0
(b) Haemolytic Streptococci—		
(i) Cultural examinations	895	1,445
(ii) Groupings	73	81
(iii) Anti-streptolysin titre tests	104	132
2. Enteric Infections (Salmonella and Shigella)—		
(i) Cultural examinations	2,095	2,193
(ii) Identifications	1,364	1,962
(iii) Bacteriophage typing (S. typhi, S. paratyphi B, S. typhimurium)	636	823
(iv) Widal agglutination	239	3,027
3. Serological Investigations—		
(a) Brucella	502	1,173
(b) Glandular Fever	147	119
(c) Leptospirosis	80	42
(d) Typhus Fever	38	32
(e) Rubella H.I.	1,425	1,388
(f) Others	1	3
4. General Bacteriological Examinations—		
(i) Cultures	3,904	7,352
(ii) Drug sensitivities	2,778	4,028
5. N. gonorrhoeae and related infections—		
(a) N. gonorrhoeae—		
(i) Smears	1,357	1,644
(ii) Cultural examinations	12,223	12,607
(b) Trichomonas vaginalis—		
(i) Culture	150	188
6. Medical Mycology	120	277
7. Water examinations	613	272
8. Parasitological examinations	1,035	1,191
Totals	30,675	41,424

GOVERNMENT CLINIC FOR VENEREAL DISEASES

Statistical and other information presented in this section covers the 1977 calendar year.

Some comparative figures for the ensuing six months (Jan. 1st to June 30th, 1978) are also included.

TABLE 1—NEW PATIENTS AT THE GOVERNMENT CLINIC

Year	Patients (New)			Gonorrhoea			Syphilis		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
1968 ..	3,015	1,201	4,216	734	335	1,069	40	5	45
1969 ..	3,016	1,167	4,183	796	372	1,168	70	8	78
1970 ..	3,329	1,546	4,875	952	721	1,673	38	4	42
1971 ..	3,558	1,639	5,197	1,014	659	1,673	34	10	44
1972 ..	4,309	2,095	6,404	1,009	832	1,841	38	8	46
1973 ..	4,690	1,991	6,681	868	809	1,677	26	9	35
1974 ..	5,392	2,092	7,484	933	714	1,647	41	5	46
1975 ..	6,406	2,415	8,821	1,120	590	1,710	59	8	67
1976 ..	6,445	2,283	8,728	1,010	406	1,416	55	9	64
1977 ..	7,635	2,300	9,935	1,048	372	1,420	19	5	24

Table 1 indicates the attendance figures for new patients at the Government Clinic for the past ten years, including the number of patients diagnosed as suffering from syphilis and gonorrhoea.

TABLE 2—NEW PATIENTS AT THE GOVERNMENT CLINIC FOR THE FIRST SIX MONTHS OF 1977 and 1978

Year	Patients (New)			Gonorrhoea			Syphilis		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
1977 (6 mths) January- June ..	3,430	1,126	4,556	513	189	702	11	2	13
1978 (same 6 months)	4,167	1,107	5,274	678	207	885	12	10	22

The number of new patients seeking treatment at this clinic showed an increase on previous years, particularly in the male section, with female attendances stationary.

Attendance figures for the first six months of 1978 are again higher than for the corresponding period for 1977, without any significant increase in the number of cases of either gonorrhoea or syphilis.

TABLE 3—VENEREAL DISEASES NOTIFICATIONS FOR VICTORIA

	<i>Gonorrhoea</i>			<i>Syphilis</i>		
	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
Government Clinic.. .. .	1,048	372	1,420	19	5	24
(Others) Metropolitan and Country	512	205	717	62	14	76
1977	1,560	577	2,138	81	19	100
1976	1,419	520	1,939	147	33	180
1975	1,488	753	2,241	150	26	176
1974	1,189	858	2,047	88	40	128
1973	1,038	893	1,931	56	88	144
1972	1,305	925	2,230	57	54	111
1971	1,345	734	2,079	61	38	99
1970	1,300	768	2,068	59	14	73
1969	1,175	450	1,625	97	54	151
1968	1,189	424	1,613	65	19	84

The only other notifiable diseases reported were one male and five female cases of chancroid (soft sore).

Included in the figures for gonorrhoea was one case of conjunctivitis (ophthalmia) in a neo-nate.

For the second successive year there were no reports of congenital syphilis.

As stated in previous reports, the number of reported cases of gonorrhoea in Victoria rose rapidly from an all-time low in the early fifties, to high figures about 1970.

Since then the numbers have fluctuated around the same level, and appear to have stabilised.

The number of reported cases of syphilis, which also declined to a low level in the fifties, has increased in the past decade, but the overall rates are much lower than those for gonorrhoea.

An interesting fact has emerged from these statistics, showing that the majority of cases of syphilis are being reported from sources other than this clinic, with approximately one-third attending one group practice (thirty-six cases), and another one-third being managed by other private practitioners.

TABLES 4 AND 5—PROVIDE A BREAKDOWN OF CASES INTO AGE AND SEX BRACKETS, PLUS THE AGE AND SEX GROUPS FOR ALL NEW PATIENTS ATTENDING AT THE GOVERNMENT CLINIC

FEMALES

Age Groups	Government Clinic			Rest of Victoria		Total	
	Attendances	Gonorrhoea	Syphilis	Gonorrhoea	Syphilis	Gonorrhoea	Syphilis
0-14 ..	46	1	..	1	..	2	1
15-19 ..	661	109	..	39	1	148	1
20-24 ..	772	155	2	60	4	215	6
25-29 ..	399	54	..	33	2	87	2
30-34 ..	176	33	..	11	2	44	2
35-39 ..	116	11	..	4	1	15	1
40-44 ..	44	4	..	5	1	9	1
45-49 ..	44	2	2	..	1	2	3
50+ ..	42	3	1	2	1	5	2
				(? Age Group, as Unspecified)			
				50	1	50	..
Total ..	2,300	372	5	205	14	577	19

MALES

Age Groups	Government Clinic			Rest of Victoria		Total	
	Attendances	Gonorrhoea	Syphilis	Gonorrhoea	Syphilis	Gonorrhoea	Syphilis
0-14 ..	..	..	..	..	1	..	1
15-19 ..	1,093	169	..	48	1	217	1
20-24 ..	2,401	346	4	140	8	486	12
25-29 ..	1,739	245	1	154	14	399	15
30-34 ..	980	125	3	52	12	177	15
35-39 ..	552	90	5	27	6	117	11
40-44 ..	320	44	5	9	9	49	14
45-49 ..	232	8	..	10	6	18	6
50+ ..	308	19	1	8	3	27	4
Age not Specified ..	10	2	..	68	2	70	2
Total ..	7,635	1,048	19	512	62	1,560	81

The distribution on the male side conforms to previous patterns, the highest attendance and cases of gonorrhoea being in the 20-24 age group.

The figures for syphilis are spread out from twenty years onwards, tailing off after 40 years of age.

In both tables there is a moderate number of cases with the age unspecified. These are cases reported to the Commission by the Melbourne Diagnostic Unit from patient specimens referred for examination by private medical practitioners.

Most of their request forms do not contain the patient's age, and many are never officially notified by the referring doctors, and so they are of no use in the statistics for compiling an age distribution table.

TABLE 6

In table 6 the notified cases of syphilis have been arranged according to sex and into stages, with comparative figures for the previous two years

Year	Primary		Secondary		Early Latent		Late latent		Congenital		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1975.. ..	65	2	50	8	35	14	..	1	..	1	176
1976.. ..	45	6	65	7	34	19	3	1	..	..	180
1977.. ..	34	5	29	4	14	9	4	1	..	..	100

The figures conform to a similar pattern, but with a reduction in the total number for 1977.

As reported previously a greater percentage of males are detected in the early infectious stages than females.

Homosexual males still predominate in the male notifications.

As stated, the figures in Table 3 illustrate a fairly stable incidence of venereal disease since 1970, after the rapid rise in the decade before.

For a better appreciation of this fact the true incidence of these diseases in the population, namely the numbers standardised against a population rate of 100,000, are presented in Table 7, with groups of comparative findings since 1917.

This shows that the true incidence of gonorrhoea is stable around 56.5 per 100,000 and for syphilis the low value of 2.7.

TABLE 7—VENEREAL DISEASES IN VICTORIA
ATTACK RATE PER 100,000 OF MEAN POPULATION

Year	Victoria's population	Gonorrhoea		Syphilis	
		Number	Rate per 100,000	Number	Rate per 100,000
1917	1,417,000	5,448	384.5	2,657	187.5
1918	1,437,235	5,076	353.2	2,135	148.5
1919	1,503,035	5,743	382.1	2,343	155.9
1927	1,741,832	4,601	264.2	918	52.7
1928	1,761,746	4,613	261.8	1,024	80.6
1929	1,778,269	4,584	257.8	659	37.1
1944	1,997,954	1,916	95.9	428	21.4
1945	2,015,107	2,302	114.2	421	20.9
1946	2,039,769	2,575	126.2	452	22.2
1954	2,477,986	467	18.8	133	5.4
1955	2,546,332	573	22.5	180	7.1
1956	2,618,112	651	24.9	128	4.9
1964	3,161,537	1,302	41.2	59	1.9
1965	3,233,938	1,586	49.0	85	2.6
1966	3,247,478	1,821	56.1	56	1.7
1967	3,323,400	1,772	59.3	106	3.1
1968	3,384,100	1,580	47.7	96	2.8
1971	3,496,161	2,079	59.4	99	2.8
1972	3,547,400	2,230	62.8	111	3.1
1973	3,600,000	1,931	53.0	144	4.0
1974	3,645,300	2,047	56.1	128	3.5
1975	3,673,400	2,241	60.1	176	4.7
1976	3,746,000	1,939	51.7	180	4.8
1977	3,782,300	2,138	56.5	100	2.7

TABLE 8—VENEREAL DISEASES NOTIFICATIONS
VICTORIA

Year	Gonorrhoea	Soft sore	Syphilis		
			Congenital	Acquired	Total
1917-18.. .. .	5,448	126	243	2,414	8,231
1918-19.. .. .	5,076	123	211	1,924	7,334
1919-20.. .. .	5,743	477	32	2,311	8,563
1920-21.. .. .	4,285	285	9	1,507	6,086
1921-22.. .. .	3,970	139	53	1,635	5,797
1922-23.. .. .	3,400	168	93	1,380	5,041
1923-24.. .. .	3,546	59	72	1,055	4,732
1924-25.. .. .	4,205	26	84	1,253	5,568
1925-26.. .. .	4,480	88	58	732	5,358
1926-27.. .. .	4,380	96	45	857	5,378
1927-28.. .. .	4,601	101	13	905	5,620
1928-29.. .. .	4,613	80	57	967	5,717
1929-30.. .. .	4,584	76	6	653	5,319
1930-31.. .. .	4,122	63	10	683	4,878
1931-32.. .. .	3,859	62	15	780	4,716
1932-33.. .. .	3,436	57	6	744	4,243
1933-34.. .. .	2,984	39	4	511	3,538

As a final contribution Table 8 depicts the status of venereal diseases from 1917 onwards. These figures were recently obtained from some very old records at the Clinic. The massive fall in notifications of all venereal diseases since then is striking, especially for soft sore and syphilis, and in particular for congenital syphilis.

The close similarity clinically between soft sore infections and genital herpes and the very low incidence of soft sore for the past 30 years suggests that with these old notifications there was probably less accurate diagnosis than now, and that possibly a large percentage of these cases was, in reality, genital herpes infection.

Other Items Relating to Venereal Diseases Management

1. Fairlea Women's Prison

The incidence of disease amongst the inmates of this establishment remains low. There is a rapid turnover of personnel through the prison, with only a few long-term sentences. A total of 195 were examined, with 7 cases of gonorrhoea being detected, but no cases of syphilis.

2. Resistant Strains of Gonorrhoea

The number of these cases being detected in Victoria remains low, and so far the predicted epidemic has failed to materialise. The majority of cases seen have contracted their infection in Manila or Singapore, and secondary spread in Victoria has so far been prevented.

3. Winlton Training Centre

The present system of visiting this Centre to examine suspected cases is working satisfactorily, and the incidence of diseases amongst these young girls remains low.

4. Venereal Disease Pamphlets

Two leaflets on venereal disease are distributed by the Department at present, but a single leaflet translated into foreign languages (English, Greek, Italian, Jugoslav, Turkish, French and German) is to be introduced.

5. Venereal Disease Notifications

In most States of Australia it is compulsory for all laboratories, including private ones, to notify to the State Health Departments all cases of venereal disease detected. This assists not only in compiling accurate statistics of disease incidence, but also aids in contact tracing and venereal disease control, and it is again reiterated that this regulation should be introduced in Victoria.

EXOTIC DISEASES HOSPITAL, FAIRFIELD

At 31st December, 1977 there were 52 persons being treated for Hansen's disease, 2 as in-patients and 50 as out-patients.

The following table shows the sex and nationality of these patients.

<i>In-patients</i>		<i>Out-patients</i>		<i>Nationality</i>
<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	
1	..	1	..	Australian
..	1	Cambodian
..	..	1	..	English
..	1	Greek
1	..	12	6	Indian
..	..	1	..	Indonesian
..	..	1	..	Lebanese
..	..	10	1	Maltese
..	..	1	2	Mauritian
..	..	1	1	Seychelles Islander
..	..	1	..	South African
..	..	5	2	Sri Lankan
..	..	1	1	Vietnamese
2	..	35	15	

Out-patients receive regular medical examinations and supplies of drugs.

The hospital is also available to accept persons found to be suffering from other exotic diseases requiring complete isolation.

FOOD STANDARDS COMMITTEE

The Committee met on five occasions during the year and, as in the past, the majority of matters discussed related to the adoption of, or provision of comments on, recommendations made by the National Health and Medical Research Council, or draft standards put forward by the Commonwealth Food Standards Committee.

Several amendments to the Food and Drug Standards Regulations 1966 were recommended by the Committee, and one new Statutory Rule was approved by the Governor in Council. These amendments related to several matters including the extractable lead and cadmium content of food utensils, labelling of analgesic preparations, aflatoxin levels in foods, and condensed skim or separated milk.

Consolidation of the Food and Drug Standards Regulations is progressing and when completed this will be of much benefit.

The Food Standards Section of the Commission has continued to encourage manufacturers and others within the food industry to submit new or revised label designs for checking to ensure that they comply with the Regulations, and this service has proved of great assistance to those who have availed themselves of it.

HEALTH LABORATORY

General

During the year the Health Laboratory staff examined about 3,500 samples, covering a wide variety of substances and articles. Officers have answered many technical inquiries directed to the Department, and carried out field work and assisted in prosecutions under the Health Act.

The Assistant Senior Chemist, Mr. N. Greene, attended two sequential conferences in Brisbane concerned with analytical chemistry and determination of heavy metals. Mr. D. Hodgkins visited Canberra for the Pesticide Residue Chemists' Conference, while Mr. G. Fazekas went to Sydney for the First Australian Conference on Food Microbiology. Mr. J. Brideson participated in the workshop study conducted in the Australian Government Analytical Laboratory, Melbourne, and Mr. N. Menz attended a symposium on High Pressure Liquid Chromatography.

The Senior Chemist and Food Technologist, Mr. R. Stanhope, arranged the meeting of State Food Analysts from all States which was held at the Health Laboratory. He also organised and chaired a session on pesticides and food at the ANZAAS conference and represented the Department at the Annual Convention of the Australian Institute of Food Science and Technology, both being held in Melbourne. During the year Mr. Stanhope was appointed to the newly-formed Food Legislation Committee of the National Health and Medical Research Council, and continued his work on the Standards Association Committee dealing with Plastics for Food Contact.

The laboratory acquired a new gas chromatograph to replace obsolete equipment, and additional platinum ware. An instant colour camera was also purchased, and this has proved invaluable as a means of making permanent records for laboratory purposes.

Meat and Meat Products

Results for the year are summarised in Table 1.

The lowest meat contents found were 64% in sausages, 42% in frankfurts, and 20% in meat pies, against the respective legal minima of 75%, 66% and 25%.

Excess nitrite was detected in one meat product.

A green discolouration which had developed in a meat sausage was of considerable interest. An extensive investigation confirmed that this resulted from interaction between bacteria and the food. Bacterial action was also responsible for slime on frankfurts and the "blown" condition of the plastic package containing them.

TABLE 1—SUMMARY FOR MEAT PRODUCTS

Type	Number examined	Number not complying	Percentages not complying in		
			1977-78	1976-77	1975-76
Meat—					
Fresh	210	3	1	0	2
Chopped	233	27	12	9	11
Corned	13	0	0	20	0
Manufactured	218	10	5	4	2
Canned	8	0	0	0	0
Sausages and sausage meat ..	271	23	8	8	11
Tripe	11	1	9	5	17
Meat pies	32	3	9	18	24
	996	67	6.7	6.9	8.2

During the year a survey of sliced cooked, vacuum-packed meat products for microbiological status and nitrate/nitrite content was commenced. Twenty-nine samples had been tested by the end of June, falling broadly into three classes—ham, corned beef and emulsion type products. Total counts averaged 4.4×10^8 micro-organisms per gram, indicating an excessive storage period. The flora present however, were mainly psychrophiles, which suggests that storage temperatures were satisfactory. Coliforms were detected in two-thirds of the packs examined, with 28% giving a reading greater than the suggested limit of 200 per gram. The presence of *E.coli* was confirmed in only 3% of the packs. Coagulase-positive staphylococci were also present in 3% of the products analysed.

Levels of nitrite and nitrate found in this survey were all within prescribed limits, and none whatsoever was detected in some samples. Formation of excess nitrite, i.e. above 1 grain per pound, within these foods from the nitrate present would be virtually impossible since the proportion of the latter did not rise above 2 grains per pound.

An assessment of one smallgoods plant was made following excessively high counts obtained on the final product. This inspection revealed exposure to cross-contamination of product from raw ingredient and excessive manual contact with the food. Further, there was no microbiological quality control programme in operation.

Dairy Products

The wide variety of dairy produce submitted to the section is summarised in Table 2. All samples complied with the relevant compositional standards in the regulations. It should be noted, however, that a number of milk products contained foreign substances, and these are covered later under "Contamination of food".

During July 1977 the Laboratory's staff assisted in investigations related to contamination of powdered milk products with salmonellae.

A survey of penicillin residues in milk, commenced in early 1977, was completed during September. Only one sample of a total of 55 taken in the metropolitan area contained penicillin, at a level of 0.003 microgram per ml. Four out of 80 from country areas were positive, and ranged from 0.002 to 0.006 microgram per ml.

The laboratory also participated in a collaborative study of methods for iodine in milk organised by the New South Wales Dairy Industry Authority.

TABLE 2—DAIRY PRODUCTS. EXAMINED FOR COMPLIANCE WITH COMPOSITIONAL STANDARDS

<i>Product</i>	<i>Number examined</i>
Milk—	
Flavoured	10
Fresh	161
Powdered	9
Butter	24
Cream—	
Fresh	11
Thickened	4
Cheese	23
Icecream	9
Yoghurt	9
	260

Bread

Of 33 samples, seven did not comply with statutory requirements. No milk solids were detected in a loaf described as milk bread. The other six contraventions all involved this type of bread, the proportion of milk solids ranging from 0·2% to 3·5%, against the prescribed minimum of 4%.

Two breads described as high in fibre contained 2·8% and 3·0% fibre, compared with the requirement of 1·8% for wholemeal breads. All wholemeal breads examined contained sufficient fibre.

Preservatives and Colours

The somewhat high concentration of 3,200 parts per million benzoic acid together with a smaller amount of sulphur dioxide was found in apricots, which are not permitted to contain preservatives. Mushroom sauce also contained benzoic acid, at a level of 2,170 parts per million. Excess preservative was present in syrup and grape juice, in both of which it is allowed up to a prescribed maximum.

Following a consumer complaint, it was discovered that oranges with coloured skins were on sale. The fruit had apparently been imported from Queensland, where colouring is allowed. The particular dye used is not on the prescribed list, and is therefore not permitted, even in those foods which may be coloured in Victoria. The fruit was removed from sale.

Gherkins were found to contain green colouring in excess of the regulatory maximum of one part in 3,500.

The presence of extractable colour was a cause for concern in other instances. The green, yellow, blue and purple colours in "anodised" aluminium tumblers were easily leached into various beverages and the utensils were withdrawn from the market. The dyes on wooden play blocks were extracted by boiling water, and the toy was considered unsatisfactory.

The green colour on overalls submitted from a penal institution was caused by the presence of copper, apparently from the washing water.

Contamination of Food

Findings are summarised in Table 3.

Evidence of rodent and insect infestation was found in about a quarter of the samples. Rodent excreta from a cupboard in a shop was also received for identification, adding emphasis to the need for continual vigilance in excluding disease-carrying pests from food storage areas.

Foods were adulterated in some cases due to apparent processing faults. Following complaints of an offensive taste in cartoned milk, scientific officers from the Health Laboratory investigated the matter and established that the milk had been contaminated with chlorinated wash water used to clean out pipes on the filling equipment. A complaint was also received concerning black specks on the inside base of milk cartons, apparently due to charring during the folding process.

A soft drink can with an excessive amount of internal lacquer was responsible for an off-flavour due to solvent. Calcium chloride found in an ice confection originated in the brine used for freezing the product.

Cans of imported cherries were blown due to fermentation of the product, and fermented fruit juice was also received.

Mould growth in an insulated "air pot" hot drink flask was caused by the design of the lid, which was difficult to clean properly.

Crystals of "struvite", a naturally-occurring phenomenon in sea foods, were found in canned salmon. This substance is often mistaken for glass.

The danger to health in placing hazardous substance in food containers was evidenced by the use of wine bottles for a liquid employed to clean pipes in a hotel. The substance was highly caustic and caused serious injury.

TABLE 3—LIST OF EXTRANEEOUS SUBSTANCES

<i>Sample</i>	<i>Foreign Material</i>
Beans	Soil
Beer	Cellulosic matter
Beer (alleged)	Surface active material
Biscuits	Rodent excreta
Bran	Rodent excreta
Bread (roll)	Charred material and soil
Bread (white sliced)	Pieces of rodent tail
Bread	Rust
Bread	Soap
Breakfast cereal	Copper wire
Bun, wholemeal	Vegetable matter
Buns, yeast	Rodent excreta
Confectionery	Mould
Cream, thickened	Mould
Figs, dried (3 samples)	Insect frass and larvae
Figs, dried (1 sample)	Insect frass and mould
Figs, dried (1 sample)	Insect frass
Figs, dried (2 samples)	Mould
Goats' milk, dried (2 samples)	Burnt particles
Iced Confection	Calcium chloride
Infant food (canned)	Mould
Infant formula	Small insects
Lentil wafers	Human hair
Margarine	Pieces of rubber
Meat (canned)	Mould
Meat (Pressed and cooked)	Pieces of plastic
Meat loaf	Fly
Meat pie	Bovine hair
Milk	Algae
Milk	Cardboard
Milk	Cellulosic fibres
Milk	Chlorinated water
Milk	Chewing gum
Milk	Grease
Milk	Peach skin
Milk	Piece of plastic film
Milk	Small insect
Milk	Soil particles
Milk	Vegetable oil
Muesli bar	Insect frass
Oatmeal	Mould
Pastie	Piece of copper
Pie (Cottage type)	Rubber ring
Pork and veal mince	Pieces of lead
Potato chips	Charred vegetable oil
Potato chips	Chunks of potato
Potato chips	Vegetable matter
Rice (fried)	Cigarette butt
Sausage (Devon type)	Piece of plastic film
Sausage (Strasburg type)	Piece of bovine skin
Snack roll	Rubber and fibres
Soda water	Mould
Soft drink	Insect fragments and mould
Soft drink	Lacquer
Soft drink (9 samples)	Mould
Soft drink	Piece of paper
Soft drink	Salt
Soft drink	Spider and fly
Soft drink (2 samples)	Vegetable oil
Soya beans	Particles of rock
Tomatoes (Canned)	Fly
Tonic water	Ants
Toothpaste	Tail of small reptile
Vegetables (cooked)	Key ring
Wine	Cockroach
Yoghurt	Mineral oil (trace)
Yoghurt	Rodent excreta
Yoghurt pies (2 samples)	Pieces of fly

Pesticides

This year's samples included a range of canned fruit and vegetables, most of which contained no detectable pesticide residues, and this was the case in a large proportion of the foods examined. Results are summarised in Table 4.

Excess lindane was found in bran flakes which had been sprayed in a shop.

Small amounts of BHC and dieldrin were found in packaged lima beans and traces of dieldrin in grapes. Although there are no statutory tolerances for these residues they are too low to be of any significance.

All other foods examined contained residues below statutory limits.

Tests on blood were also carried out for the Industrial Hygiene Division of the Commission.

TABLE 4—SUMMARY OF PESTICIDE RESULTS

<i>Nature of sample</i>	<i>Number</i>	<i>Analyses carried out</i>	<i>No. of samples in which pesticides were detected</i>
Apples	4	4 for Thiabendazole ..	1
		1 for O.C.	0
		1 for O.P.	0
		1 for Arsenic	0
Asparagus (Canned)	1	1 for O.C.	0
		1 for Carbaryl	0
Bag liner	1	1 for O.C.	1
Beans, green (Canned)	1	1 for O.C.	1
		1 for Carbaryl	0
Beans, Lima	6	6 for O.C.	6
Beans, Lima (Canned)	1	1 for O.C.	0
		1 for Carbaryl	0
Beetroot (Canned)	1	1 for O.C.	0
		1 for Carbaryl	0
Blood	42	42 for O.C.	36
Bran	6	6 for O.C.	4
		2 for O.P.	2
Cabbage	1	1 for O.C.	0
Capsicum (Canned)	1	1 for O.C.	0
		1 for Carbaryl	0
Carrots (Canned)	1	1 for O.C.	1
		1 for Carbaryl	0
Cherries, Black (Canned)	1	1 for O.C.	0
		1 for Carbaryl	0
Cocoa and Cocoa Husk Powder ..	7	7 for O.C.	5
		6 for O.P.	0
Coleslaw (Canned)	1	1 for O.C.	0
		1 for Carbaryl	0
Corn Kernels (Canned)	1	1 for O.C.	0
		1 for Carbaryl	0
Cucumber (Canned)	1	1 for O.C.	1
		1 for Carbaryl	0
Edible Oil	2	2 for Monocrotophos ..	0
Fruit, Dried	1	1 for Lindane	1
Grapes	24	24 for O.C.	16
		24 for O.P.	0
		24 for Carbaryl	0
		24 for Arsenic	0
Iced Confection	2	2 for O.C.	0
Icecream	2	2 for O.C.	0
Kiwi fruit (Sliced and Canned) ..	1	1 for O.C.	0
		1 for Carbaryl	0
Malathion Solution	1	1 for Malathion	1
Margarine	2	2 for Monocrotophos ..	0
Meat	5	5 for 2, 4-D	0

TABLE 4—SUMMARY OF PESTICIDE RESULTS—*continued*

<i>Nature of sample</i>	<i>Number</i>	<i>Analyses carried out</i>	<i>No. of samples in which pesticides were detected</i>
Milk	4	3 for O.C.	0
		1 for 2, 4-D	0
		1 for 2, 4, 5-T	0
Pastry	1	1 for Lindane	1
Peaches (Canned)	1	1 for O.C.	0
		1 for Carbaryl	0
Pears (Canned)	1	1 for O.C.	0
		1 for Carbaryl	0
Plums (Canned)	1	1 for O.C.	0
		1 for Carbaryl	0
Potatoes (Canned)	1	1 for O.C.	1
		1 for Carbaryl	0
Soup Powder	2	2 for O.C.	2
Tomatoes, Peeled (Canned)	1	1 for O.C.	0
		1 for Carbaryl	0
Water	4	3 for O.C.	0
		2 for 2, 4-D	0
		2 for 2, 4, 5-T	0
Wheat	1	1 for O.C.	0
		1 for Malathion	0
		1 for Carbaryl	0
	134	240	

O.C. = Organochlorine Compounds.

O.P. = Organophosphorus Compounds.

Metals

Once again a wide variety of foods and other substances were tested for heavy metals. (Table 5.)

A case of excessive zinc ingestion occurred during the year. A group of school children became sick almost immediately after consuming a drink made up from fruit cordial. The drink was found to contain 200 parts per million of zinc and a batch made up in the same vessel in the laboratory contained 1,200 parts per million of that metal.

A chinese "wok" was found to produce a blue colour with certain foods due to interaction of food compounds with dissolved iron from the utensil.

A 20c coin imparted only a small quantity of copper and nickel to jam in which it had been cooked as a boiling aid.

Samples of canned peaches and tomato juice had dissolved excessive tin from the can lining, and contained more than the regulatory maximum of 250 parts per million. The other foods tested complied with Regulatory requirements.

Two investigations of the copper content of water supplies were carried out—in a large hospital and a primary school. Copper will dissolve from pipes under certain conditions, and can give an unpleasant taste or even cause vomiting at low concentrations.

TABLE 5—MERCURY, CADMIUM, ARSENIC, ZINC COPPER AND LEAD

<i>Sample</i>	<i>Number analysed</i>	<i>Range (p.p.m. except where otherwise indicated)</i>
<i>Mercury</i>		
Carp	14	0·08-0·14
Fish Fingers	1	0·14
Fish Paste	4	0·04-0·11
Fish—species unknown	8	0·02-0·40
Flake—cooked	87	0·02-3·0
Flake—raw	66	0·02-3·0
Flathead	257	0·06-2·8
*Icecream	1	**N.D.
*Milk	1	N.D.
Mussels	5	0·05-0·10
Oysters	1	N.D.
Perch	2	0·21-0·24
Prawn Cutlet	1	N.D.
Scallops	2	0·05-0·07
Sediment	1	40
Seer Fish	10	0·01-0·71
Trout	2	0·14-0·34
Tuna	6	0·26-0·80
<i>Cadmium</i>		
Bubble Gum	1	N.D.
Flake	13	all 2·0
*Icecream	1	N.D.
*Milk	1	N.D.
Mussels	5	1·4-4·8
Oysters	1	N.D.
Perch	2	N.D.
Plastic granules (toy filling)	3	N.D.
Prawn Cutlet	1	N.D.
Scallops	1	0·24
Seer Fish	1	N.D.
Trout	2	N.D.
<i>Arsenic (Not including analyses listed under pesticides)</i>		
Bubble Gum	1	N.D.
Coca Cola	1	N.D.
Fish Paste	4	0·5-1·8
Fish—Seer	1	1·5
	(Composite Sample)	
Oysters	28	N.D.-0·1
Toy (Granules from)	2	N.D.
Water	3	N.D.
<i>Zinc</i>		
Beer	1	0·8
Bubble Gum	1	N.D.
Confectionary (toy lipstick)	1	N.D.
Cordial (diluted)	4	N.D.-200
Fish Paste	4	10·0-22·0
Ice Confections	2	1·6-1·8
*Icecream	1	5·0
*Milk	1	5·0
Mussels	5	4·6-44·0
Oysters	1	6·0
Powdered Milk	1	36·0
Soup	2	10·0-14·0
Scallops	1	36·0
Soft Drink	1	N.D.
Vegetables and Lamb (Canned)	2	15-18
Water (potable)	11	N.D.-0·6
Whisky	1	3·0

TABLE 5—MERCURY, CADMIUM, ARSENIC, ZINC, COPPER AND LEAD—*continued*

<i>Sample</i>	<i>Number analysed</i>	<i>Range (p.p.m. except where otherwise indicated)</i>
<i>Copper</i>		
Beer	1	N.D.
Bubble Gum	1	N.D.
Cordial	4	N.D.-3.5
Fish Paste	4	2.2-2.4
Ice Confections	3	N.D.
Ham	2	1.4-3.9
Mussels	5	N.D.-4.6
Overalls	1	1000
Plastic granules (toy filling)	2	N.D.-0.4
Sausages	2	4.0-5.5
Soft Drink	1	N.D.
Soup	2	3.0
Staple	1	88%
Vegetable and Lamb (Canned)	2	2.0
Water (Potable)	95	N.D.-5.3
Whisky	1	2.0
<i>Lead</i>		
Bubble Gum	1	N.D.
Confectionery	1	N.D.
Crayons, boxes of	2	N.D.-0.4%
Fish Paste	4	N.D.
*Icecream	1	N.D.
Meat (Canned)	1	N.D.
*Milk	1	N.D.
Mussels	5	N.D.-12.0
Paint	2	2.6%-5.2%
Paint (from Skipping Rope Handles)	2	N.D.
Scallops	1	N.D.
Seer Fish	1	N.D.
Vegetables and Lamb (Canned)	2	2.0

* Analysed as part of N.H. and M.R.C. total diet study.

N.D. Not Detected

"Tris" Fire Retardant

During mid-1977 it was reported from the United States of America that a compound, tris (2, 3-dibromopropyl) phosphate, known as "Tris", could constitute a carcinogenic hazard when used on clothing as a fireproofing agent. A method for detection of this substance was developed, and a range of fire-resistant garments and fabrics was examined. Fourteen of these samples, out of a total of 63 tested, were shown to contain "Tris".

Waters, Effluents and Trade Wastes

Samples in this category totalled 836 for the year, and included sewage effluents, water supplies and complaints.

The Laboratory has continued work on waters used in home and hospital renal dialysis units. The number tested rose to 170 from 117 in the previous year.

The number of fluoridated waters received for checking under the Fluoridation Act also continued to rise as the number of treatment plants increases.

A mineral water contravened the food regulations in that its composition was not stated on the label with sufficient accuracy.

Miscellaneous

Assistance was given to a municipal health inspector investigating a dust problem in a large "bulk discount" type food premises which adjoined an abattoir. The first inspection revealed dust settling throughout the store and evidence of rodent infestation. Samples of dust were taken on this occasion and at a subsequent visit two weeks later. Appropriate action has since been taken to improve the construction and layout of the premises.

An extensive investigation of an alleged chocolate product was undertaken, involving detailed gas chromatographic analysis of the fat component. It was shown that the food in question contained other fats and should have been labelled "compounded chocolate".

The cyanide content of apricot kernels on sale was further studied. The level in one brand fell from about 2,000 to 1,300 parts per million after the treatment advised on the label, indicating that this procedure did not remove the potential hazard. Apple seeds were also shown to contain about 500 parts per million.

Two rancid margarines were reported, and one of seven liquid egg samples was found to be unpasteurised, in contravention of the regulations.

Further work was carried out on the determination of aflatoxins. A statutory maximum of 15 micrograms per kilogram was introduced in December for peanuts and peanut products.

An interesting matter raised during the year concerned a type of snack roll which tended to explode on heating in oil. It was concluded that this was caused by pressure developed within the food and consequent bursting of the pastry casing, which was virtually airtight in some instances. It was recommended that the rolls should be pierced before heating.

A survey of the fatty acid composition of polyunsaturated margarines on sale in Victoria was undertaken. Results indicated that regulatory requirements were being met.

POISONS DIVISION

Committee and Sub-committee Meetings

The poisons Advisory Committee met on four occasions, and the Scheduling Sub-committee on five occasions, during the year. Also, important matters relating to the criteria for licensing of wholesalers and manufacturers of drugs of addiction, and the provision of certain drugs in ambulances were considered by various Working Parties appointed by the Committee.

Legislation

The following legislation was introduced during the year:

Poisons (Analysis of Cannabis L) Regulations 1977;

Poisons (Analysis of Cannabis L) Regulations 1978.

Upon the commencement of the *Poisons (Drugs of Addiction) Act 1976* the *Poisons (Analysis of Cannabis L) Regulations 1977* were made, providing for the method of analysis of Cannabis L for the purposes of Section 32 of the Act. These Regulations were found to be impractical in respect of proof in court proceedings by analysts, and accordingly the simplified *Poisons (Analysis of Cannabis L) Regulations 1978* were introduced.

Poisons (Hallucinogenic Drugs) Regulations 1977—These Regulations provide for the possession and use of specified hallucinogenic drugs under the warrant of the Chief Health Officer for the following purposes:—

- (a) for human therapeutic purposes; or
- (b) for research, experimental or analytical purposes;
 - (i) on animal subjects other than human beings, or on animal tissue.
 - (ii) on plants or other botanical specimens.
 - (iii) for the calibration of scientific instruments including testing apparatus.
 - (iv) for the chemical evaluation or assay of compounds.
 - (v) for the analysis of synthesis of chemical compounds.
 - (vi) for use as a chemical control.

Poisons (Drugs of Addiction) Act 1976—This Act which came into operation on the 1st September, 1977 amends the *Poisons Act 1962* with respect to regulatory powers, the creation of a position for the Chief Commissioner of Police or his nominee on the Poisons Advisory Committee, the insertion of a Schedule Eleven which details the quantity of certain drugs for the purpose of prima facie evidence of trafficking, and amends the interpretation of Indian Hemp and penalties liable under the *Poisons Act 1962*.

Proclamations—Three proclamations were approved by the Governor in Council amending entries to the Schedules to the *Poisons Act 1962*. A direction was received from the Attorney General that all future proclamations made under the Poisons Act are to be Statutory Rules. This will mean that such proclamations will be printed as Statutory Rules and will be freely available from the Government Printer.

Co-ordination of Activities between States

(a) National Standing Control Committee on Drugs of Dependence

Dr. J. W. Ross, Senior Poisons Control Officer, attended two meetings of the National Standing Control Committee on Drugs of Dependence (NSCC) as adviser to the Permanent Head and to the Deputy Secretary with representatives of Commonwealth Departments and the other States.

The NSCC continued its role of advising the Prime Minister in respect of policies in the areas of health, law enforcement and drug education.

(b) Poisons Schedule Standing Committee

Mr. F. R. Ahern, Poisons Control Inspector, attended two meetings of the National Therapeutic Goods Committee which is established under the Commonwealth Therapeutic Goods Act to exercise control and co-ordinate legislation throughout the Commonwealth and State Departments of Health over all therapeutic goods.

(c) Monitoring of Drug Transactions—Drugs of Addiction

The Division continued to monitor the movements of drugs of addiction and to provide information to the Commonwealth Health Department on stock balances and weekly adjustments by all licensed wholesalers and manufacturers of drugs of addiction.

The Division continued to survey movement returns of drugs of addiction to determine infringements of State legislation.

Last year it was reported that close attention was being given to the consumption of methadone and the restricted substances methaqualone and pentazocine. As a result methaqualone has been scheduled a drug of addiction and is subject to weekly movement reporting.

Health Education Activities

The Senior Poisons Control Officer and all Poisons Control Inspectors continued to participate in the National drug education program as members of the speakers panel of the Health Education Centre. These Officers also participated in symposia and lectures on poisons legislation and other topics associated with drugs, poisons and therapeutic goods.

On request, officers also lectured students at Melbourne University, Oakleigh Technical School and various State Colleges of Education. The Senior Poisons Control Officer also participated in major health education seminars designed to combat the incidence of pediculosis in the community.

Therapeutic Goods

(a) Drug Recalls

Seventeen recalls of sub-standard therapeutic goods were instituted during the year. Although one more than last year this indicates that the activity of the Division in ensuring manufacturing quality assurance is effective.

Recalls were necessary for the following reasons—particulate matter; contaminated contents; failure to meet required standards of potency; and faulty or incorrect labelling and packaging.

Appropriate follow-up investigations were made and recommendations formulated to prevent recurrences.

(b) Code of Good Manufacturing Practice

Mr. F. G. Jameson, Poisons Control Inspector, has continued as Co-ordinator of joint inspections with Officers of the Commonwealth Health Department throughout the year. To ensure compliance with the Code, 93 joint Commonwealth/State inspections were made and follow-up procedures were undertaken where appropriate.

Particular attention was given this year to quality assurance in hospital pharmacies where manufacturing occurs. Each of the major public hospitals in Victoria was inspected and given reports in accordance with the Code.

(c) Proprietary Medicines

Mr. J. R. Jewell, Scientific Officer, has continued to provide technical advice on matters to be placed before the Proprietary Medicines Advisory Committee and to scrutinise applications for registration as proprietary medicines for compliance with poisons legislation.

In addition, responsibility for field inspections and matters related to the manufacture and unlawful sale of unregistered proprietary medicines was transferred to the Poisons Division during the year.

Professional and Technical Advice and Assistance

Officers of the Division continued to provide advice to Industry, the professions, and the public on all aspects of the manufacture, packaging, labelling, containers and Regulations concerning the distribution and use of poisons.

Mr. F. R. Ahern, Poisons Control Inspector, represented the Division at 12 meetings of the Stock Medicines Board of Victoria and ten meetings of the Contraceptives Registration Board of Victoria.

The Division also provided inspectorial support and advice to the Special Accommodation Houses Section of the Commission.

Mr. K. W. R. Plummer has continued to act as "liaison officer" with the Victoria Police and made nine appearances as an expert witness in police prosecutions under the Poisons Act and Motor Car Act.

All applicants to the Department of Agriculture seeking registration of products for use as stock foods or medicines were referred to the Division by the Director of Agriculture and written advice on the suitability of labelling and packaging was provided to applicants where products contained scheduled poisons.

Drug Security

During the year breakings and enterings of chemist shops, medical practitioners' surgeries and cars decreased. This in part has resulted from officers supervising the destruction of excessive stocks of drugs of addiction held at retail pharmacies and effectively educating pharmacists about the danger of holding large stocks of drugs at their premises.

However, a substantial increase in the number of armed hold-ups at retail pharmacies gives cause for concern. Because of small hauls from breaking and entering and increased out-of-hours security, resort to armed hold-ups has increased.

Nevertheless, this increase in one area of drug-related crime is against a background of an overall decrease in drugs of addiction moving into illicit areas.

Permits for Drugs of Addiction

The number of permits issued to medical practitioners by the Chief Health Officer to prescribe Schedule 8 amphetamine drugs other than drugs of addiction in excess of 8 weeks showed a very marked increase on the previous year.

A total of 3759 permits for 2456 patients were issued, compared with 3087 permits for 1976-77 and 1058 permits for 1975-76. Of this number, permits to prescribe drugs of addictions for long-term treatment of medical conditions other than drug addiction again increased from 988 permits for 885 patients in 1976/77 to 1255 for 1103 patients.

Permits to prescribe Schedule 8 amphetamine drugs showed a slight decrease—142 permits for 139 patients, compared with 156 permits for 147 patients last year.

In the period under review 543 people were notified to the Chief Health Officer as drug addicts compared to 637 people the previous year.

2362 permits for 1214 patients were granted by the Chief Health Officer for treatment with drugs of addiction of addicted patients, compared with 1943 permits for the previous year.

Licensing

Officers of the Division continued to inspect the suitability of premises nominated in all manufacturing and wholesale licence applications and all permit applications before such applications were recommended to the Poisons Advisory Committee for their consideration. The ability and qualifications of the applicant were also considered prior to such recommendations.

Licences and permits currently in force are as follows, and new licences and permits issued during the year are listed in brackets:

Licence to Manufacture Drugs of Addiction ..	15	(0)
Licence to Sell Drugs of Addiction by Wholesale ..	7	(1)
Licence to Manufacture Poisons (Other than Drugs of Addiction)	172	(35)
Licence to Sell Poisons by Wholesale (Other than Drugs of Addiction)	281	(73)
Educational, Advisory and Research Permits ..	625	(123)
Industrial Permits	2,344	(659)
General Dealers' Licences	157	(30)
Retail Poisons Licences	4,184	(807)
Hospital Authorities	350	(20)

PROPRIETARY MEDICINES ADVISORY COMMITTEE

Four hundred and thirty-six applications to have preparations registered as Proprietary Medicines in accordance with Division 3 of the *Health Act* 1958, were received by the Department in the past twelve months. This is an increase on last year's figure (1976-77—382 applications).

Since the inception of registration 21,399 applications have been received, of which 17,859 have been recommended for registration to the Chief Health Officer by the Advisory Committee.

During the year the Committee met 19 times—15 to consider new applications and 4 to deal with a combined agenda of both new and review applications, which are registrations of more than 10 years standing.

One supplementary register was published during the year containing 413 new registrations, 220 deletions and 52 amendments to existing registrations.

During the year, only one company exercised the right of appeal under section 263 (4) of the *Health Act* 1958, and appeared in support of the particular application.

Dr. George McEwen, who was appointed as Medical Officer to the Proprietary Medicines Advisory Committee specifically to advise the Committee concerning the suitability of medicinal preparations for registration retired during the year, and acknowledgement is made of his valuable services.

COMMUNITY WELFARE SERVICES

The Department administers the subsidies available from the Commonwealth under the States Grants (Home Care) Act to provide a Home Care Program for the aged. This program is designed to preserve the health of the aged so they may continue living in their own homes as long as possible.

These subsidies are administered in conjunction with those made available by the State Government for Elderly Citizens' Clubs and for a Home Help Service to cover the needs of the young families as well as the aged.

The subsidies are payable to municipal councils for:—

- (a) the establishment and maintenance of home help services;
- (b) the employment of welfare officers to provide a welfare service for the aged; and
- (c) the establishment and maintenance of senior citizens' clubs;

The growth of the services is a steady one, although over these last few years some areas have been retarded by the limit of finance available. This year, as for last year, the greatest growth area has been in the extension of the Home Help Service to the parents of Handicapped Children.

A great deal of additional work within the section has occurred due to the large number of elderly citizens projects now awaiting funding. Understandably, municipal councils and the elderly are most anxious for the projects to proceed in view of the rapidly increasing building costs and the limit of time left to the elderly to enjoy the regional facilities. This has resulted in numerous enquiries by letter and by telephone and through submissions directed to the Minister of Health.

To encourage the best possible use of the existing services and the promotion of new ones officers of this section continue to make as many visits as possible throughout the State. In the municipalities visited the assistant advisers discussed the services and subsidies with the municipal clerks, the home help organisers and municipal welfare officers. They also made contact with other persons interested in the provision of the service and with consumers. In this regard a number of meetings of mothers of handicapped children and the staff of local training centres have been addressed by the Senior Assistant Adviser.

The regional meetings of Home Help Organisers commenced last year were continued this year at the request of the organisers and proved of value to all. In addition the Department arranged regional meetings of Elderly Citizens' Clubs and it is hoped that these will achieve State-wide coverage by the end of the year. In arranging the meetings the Department co-operates with the Victorian Council on the Ageing and all will be attended by either the President or the Executive Director of the Council, as well as by Departmental officers. The first meeting which was held at the Camberwell Elderly Citizens' Club was officially opened by the Chief Health Officer, Dr. B. McCloskey. The meetings are to discuss a wide range of topics relating to the future development of senior citizens' clubs and their greater usage, and open discussion is encouraged. Elderly Citizens' Clubs are invited to send three representatives, two committee and one ordinary member, and Councils are asked to advise the Department of any frail aged and ethnic groups interested in attending.

During the year a pilot study was set up to permit a Day Care Centre to operate in elderly citizens' clubrooms on days when it was not in use for normal club activities. Selected for this study was the Camberwell Elderly Citizens' Club, one of the older clubs meeting in established clubrooms. This club is situated adjacent to the Camberwell Day Hospital which had indicated that it did not have the facilities to provide the necessary ongoing medical supervision and help when patients were no longer in need of the full treatment program provided at the hospital. This being so after discharge many elderly persons suffered physical deterioration to such an extent some had to be re-admitted to hospital care. The Health Department, in co-operation with the Camberwell Council and Elderly Citizens' Club, therefore agreed that the Camberwell Elderly Citizens' Clubrooms would be made available for a six months period. This scheme commenced in March and was eminently successful. It is hoped that the activities of the Day Centre will stimulate the club and provide assistance to some of the club members in need of medical supervision through physical and/or occupational therapy; also that persons treated at the Centre will continue to receive benefit through the club, either immediately or later when medical supervision is no longer necessary.

As previously mentioned the largest growth area in the services has been in the extension of the home help to the parents of handicapped children. In this field there has been a wide call for this service to further broaden into one which provides assistance outside the home, for example, taking handicapped children on outings, and providing assistance to permit mothers to work or further their education. However within the present guidelines it is providing a great deal of relief and is greatly appreciated.

In the home help field the top priority for further extensions still appears to be the need for a Handyman Service for the Aged and recommendations concerning this extension have been forwarded for consideration by the Treasurer.

The Committee investigating the need for a home help supervisor's course has continued to meet and a recommendation for the introduction of a course has been submitted by Dr. J. Best, Co-ordinator of Community Health Services.

Details concerning the subsidised services follow.

Home Help Service

This service is regarded as very important, as it plays a major role in maintaining the health and well-being of the elderly, of young families and of the chronically ill. Eligibility is a medical need.

The service provides hourly assistance to the aged and infirm when they are no longer able to perform certain household tasks, and full-time help for young families for a period of up to three weeks when a mother is prevented through confinement or illness from attending to her family's needs. It also provides hourly assistance to the parents of mentally and physically handicapped children so they may be given some relief to participate in normal community life.

The Home Help assistance is provided only within the home of the person requiring the service except when it is necessary for the home help to do the shopping. The home help is not permitted to take any person from the household out of the home environment.

The Victorian Government meets the full cost of the service to the parents of handicapped persons, and four-fifths of the cost to municipalities up to certain ceiling salary rates for home help for all other assistance. The Commonwealth Government contributes to the State \$2 for \$1 towards the cost of providing the assistance to the aged. Of the 212 municipalities in Victoria, 208 have been approved for subsidies to operate Home Help Services. Of these, 199 are currently functioning.

New Services Commenced

					1976-77	1977-78
Total Municipalities—						
Subsidised Services					203	208
Functioning Services					197	199
Organisers (full or part-time)					137	143
Home Helps—						
Full-time					166	120
Part-time					861	943
Hourly					1,953	2,190
Total					2,980	3,253
Number available to live in					30	26

<i>Assistance</i>					<i>No. in year ending December 1976-1977</i>		<i>Hours year ending March 1977-1978</i>	
					No.	Hours	No.	Hours
Elderly		17,465	1,309,582	20,464	1,450,378			
Mothers		10,628	} 443,958	10,434	} 447,799			
Others		2,648		2,677				
Total		30,741	1,753,540	33,575	1,898,177			

	1976-77	1977-78
No. of eligible cases <i>not</i> assisted	247	117

Cost

<i>Extension to Parents of Handicapped Children</i>		1977-78
Municipalities participating		169
Home Help Orientated during year		155
Total no. of Home Helps orientated		733
Total no. Orientated H/H resigned		279
Home Help currently employed (March 1978)		494
Cases Assisted for year ended 31st December—		
(a) mentally handicapped		5,158
(b) physically handicapped		750
		5,908

<i>Assistance</i>	1976		1977	
	<i>Visit</i>	<i>Hours</i>	<i>Visit</i>	<i>Hours</i>
Mentally Handicapped	38,147	..	38,262	142,842
Physically Handicapped .. ..	..	..	5,371	22,117
Total	38,147	129,660	43,633	164,959

	1976/77	1977/78
	\$	\$
Cost to Government of Extension	593,411	856,173
Home Help General and Extension Total Cost	4,953,903	6,674,692
Commonwealth Contribution	2,026,707	2,519,887
Net Cost to State	2,927,196	4,154,805

Elderly Citizens' Clubs

The object of Senior Citizens' Clubs is to assist the aged to retain their health so they may live happy independent lives in their own homes as long as possible.

This is achieved through the provision of pleasant meeting rooms where the elderly can be brought together in a happy comfortable atmosphere to enjoy activities which encourage mental and physical stimulation and community participation. Also through the provision of health promoting services such as hot meals at the club, meals on wheels and chiropody.

Government subsidies are available to municipal councils towards both the cost of establishing and maintaining senior citizens' clubs. To receive a capital subsidy towards the cost of establishing clubrooms the site and plane must be approved by the Department of Health. Both capital and maintenance subsidies are contingent on the senior citizens' clubrooms being open to all elderly persons living in the district.

The capital subsidy offered to municipal councils is up to \$30,000, plus \$2 for each \$1 contributed directly by the Council.

The maintenance subsidy towards a council's cost of conducting a senior citizens' club is on the basis of \$2 for \$1 up to a maximum of \$4,000 per annum for a senior citizens' club not providing hot meals as a service of the club, and up to \$6,000 per annum if hot meals either at the club and/or through meals-on-wheels are provided.

The Victorian Government contributes \$10,000 towards the subsidy for capital grants, the Commonwealth the balance on the basis of \$2 for \$1 contributed by the State and/or Local Government.

The full subsidy for the maintenance of the club is provided by the State Government.

	1976-77	1977-78
<i>Subsidies Approved</i>		
Municipalities	169	173
Clubs	289	306
Capital and Maintenance	223	236
Capital Only	13	12
Maintenance Only	53	58
Membership	43,081	44,471
Municipalities with Hot Meals	117	122
Average Meals Weekly—		
(a) at clubrooms	8,538	8,354
(b) meals on wheels	31,954	35,232
	40,492	43,586
Chiropody provided—		
(a) at clubrooms	122	136
(b) treatments weekly	3,285	3,309
<i>Government Expenditure—</i>		
Capital Expenditure—	\$	\$
(a) Commonwealth	1,769,278	939,508
(b) State	155,529	37,648
Total Capital	1,924,807	977,156
Expenditure Maintenance (State Only)	522,784	745,886
Total Capital and Maintenance	2,447,591	1,723,042
Balance of Capital Commitment—		
Commonwealth	695,357	856,443
State	38,574	85,608
	733,936	942,051
Total Cost of Elderly Citizens' Clubs to Government since 1955—		
Capital/Maintenance		
Commonwealth .. .. .	.. .. .	5,089,443
State .. .. .	.. .. .	6,070,952
		11,160,395

Municipal Welfare Officers for the Aged

To encourage provision of improved welfare services to the aged within the municipality a subsidy is offered to Councils which employ welfare officers providing an approved welfare service for the aged.

The welfare services provided may include:—

- (a) determining the needs of the aged population and developing services and facilities to meet their needs;

- (b) liaison with elderly citizens' club committees for the purpose of establishing or extending club services and facilities;
- (c) supervision of services provided, and to this end keeping a register of old people at risk;
- (d) fostering co-operation and liaison between welfare activities for the aged and encouraging interest in these activities;
- (e) providing an educational programme which will encourage elderly citizens' clubs to promote purposeful activity.

The subsidy payable is equal to two-thirds of the officer's salary when the officer is wholly employed on welfare for the aged.

A welfare officer who devotes 75% or more of the total time that he is employed by the Council on approved municipal welfare services for the aged is accepted as being "wholly" so employed. A welfare officer who devotes between 50% and 75% of his time to approved municipal welfare services for the aged is accepted as being "mainly" so employed and the financial assistance is two-thirds of the officer's salary in respect of the time during which he is so employed.

The full cost of the subsidy is met by the Commonwealth Government.

There are 48 subsidised welfare officers for the aged in 38 municipalities.

	1976-77	1977-78
Cost to Commonwealth Government for 12 months	\$ 242,123	\$ 355,109

HOME HELP SERVICE

SUBSIDIES APPROVED 1977-78

Increased Special Subsidies for Private Transport—28

Municipality	Previous subsidy	New subsidy	Approved	Effective from
Tambo Shire	400	3,000	18.8.77	1.4.77
Minhamite Shire	600	1,400	18.8.77	1.7.77
Phillip Island Shire	200	3,000	3.10.77	1.7.77
Bright Shire	600	1,400	"	"
Bellarine Shire	1,000	3,000	"	1.10.76
Buln Buln Shire	400	1,000	21.10.77	1.7.77
Queenscliffe Borough	2,000	3,000	"	"
Waverley City	1,200	3,000	8.11.77	"
Rochester Shire	2,200	3,000	25.11.77	1.10.77
Hawthorn City	600	1,600	6.12.77	"
Swan Hill City	200	600	16.12.77	1.7.77
Rodney Shire	800	1,600	10.1.78	1.7.77
Broadmeadows City	400	3,000	22.12.77	1.10.77
Buninyong Shire	1,400	1,800	"	1.7.77
Whittlesea Shire	1,200	3,000	19.1.78	"
Romsey Shire	400	1,000	16.1.78	"
Gisborne Shire	1,000	2,400	27.1.78	"
Tungamah Shire	400	1,400	27.2.78	1.1.78
Shepparton Shire	800	1,200	"	"
Rosedale Shire	1,600	3,000	28.2.78	1.7.77
Corio Shire	2,000	3,000	24.4.78	1.11.77
Mornington Shire	2,600	3,000	"	28.2.78
East Loddon Shire	800	2,400	"	1.10.77
Essendon City	800	1,000	"	"
Benalla Shire	600	3,000	13.6.78	1.1.78
Strathfieldsaye Shire	400	800	"	21.11.77
Maffra Shire	600	800	26.6.78	1.4.78
Hampden Shire.. .. .	1,200	3,000	"	1.10.77

HOME HELP SERVICE
SUBSIDIES APPROVED 1977-78

New Services—5

<i>Municipality</i>	<i>Subsidy to date from</i>	<i>Date approved</i>
Leigh Shire	1.10.77	3.10.77
Creswick Shire	1.10.77	21.10.77
Oxley Shire	27.10.77	27.10.77
McIvor Shire	22.12.77	22.12.77
Pyalong Shire	1.7.78	21.6.78

New Special Subsidy for Private Transport—11

<i>Municipality</i>	<i>Subsidy per annum</i>	<i>Approved</i>	<i>Effective from</i>
	\$		
Leigh Shire	1,000	21.10.77	1.10.77
Horsham City	1,600	1.10.77	18.1.77
Colac City	1,000	21.10.77	30.5.77
Creswick Shire	2,000	8.11.77	1.10.77
Deakin Shire	200	8.11.77	1.7.77
Oxley Shire	1,000	9.11.77	9.11.77
Ballarat City	3,000	25.11.77	1.10.76
McIvor Shire	1,000	22.12.77	22.12.77
Cobram Shire	1,000	11.5.78	14.3.78
Karkaroc Shire	1,000	18.5.78	1.5.78
Pyalong Shire	200	21.6.78	1.7.78

Home Help Service—New—5 Total Approved—208

Home Help Transport—New—11 Total Approved—191

MUNICIPAL WELFARE OFFICERS

SUBSIDIES APPROVED 1977-78

New Subsidies Approved—Nil

Increased Subsidies Approved—9

<i>Municipality</i>	<i>Previous approval</i>	<i>Increased approval</i>	<i>Effective from</i>
	%	%	
Wodonga City	66	90	12.7.76
Berwick City	62	75	11.10.76
Camberwell City	56	100	<i>Date of appointment</i>
Caulfield City	63	76	19.6.76
Caulfield City	69	79	24.5.76
Port Melbourne City	55	80	13.5.74
South Melbourne City	36	60	1.7.76
South Melbourne City	26	50	1.7.76
Knox City	51	80	1.10.73

Total Councils granted subsidies—38

Total Welfare Officers subsidised—48

SUMMARY OF THE HOME HELP EXTENSION TO THE PARENTS OF MENTALLY RETARDED PERSONS AND PHYSICALLY HANDICAPPED
CHILDREN PERIOD 1ST JANUARY, 1977 to 31ST DECEMBER, 1977
MUNICIPALITIES OPERATING—164

	Home helps Employed	Home helps Resigned	Assisted M.R.	Assisted P.H.	Visits M.R.	Visits P.H.	Hours M.R.	Hours P.H.	Receipt	Sufficient	
										Yes	No
Quarter 1.1.77-31.3.77	423	24	1,519	98	7,786	357	30,778	1,293	8,940	70	40
Quarter 1.4.77-30.6.77	461	21	1,353	170	10,037	1,218	35,795	5,064	10,748	94	24
Quarter 1.7.77-30.9.77	478	21	1,204	240	9,761	1,299	35,825	7,086	12,216	76	27
Quarter 1.10.77-31.12.77	518	21	1,082	242	10,678	2,497	40,444	8,674	13,912	94	23
Annual Totals	..	..	5,158	750	38,262	5,371	142,842	22,117	45,816	..	..

SUMMARY OF THE HOME HELP SERVICE FOR PERIOD
1ST JANUARY 1977 to 31ST DECEMBER, 1977

A—Cases carried over from previous quarter
B—New cases assisted during quarter

	Elderly		Mothers		Others		Cases where no Assistance Available
	A	B	A	B	A	B	
Quarter 1.1.77 to 31.3.77	10,738	2,388	517	2,333	293	550	49
Quarter 1.4.77 to 30.6.77	11,313	2,401	831	2,413	366	613	12
Quarter 1.7.77 to 30.9.77	11,421	2,537	746	2,578	339	619	18
Quarter 1.10.77 to 31.12.77	11,839	2,400	715	2,593	379	602	38
Totals	45,311	9,726	2,809	9,917	1,377	2,384	117
Columns 1A + Total of B	..	10,738	..	517	..	293	..
Total Assisted during year	..	9,726	..	9,917	..	2,384	..
	..	20,464	..	10,434	..	2,677	..

ELDERLY CITIZENS' CLUBS
MAINTENANCE SUBSIDIES—INCREASED—123

<i>Municipality</i>	<i>Location</i>	<i>Previous approval</i>	<i>New approval</i>	<i>Effective from</i>
		\$	\$	
Ballarat City	Ballarat	3,000	6,000	1.10.76
Waranga Shire	Murchison	180	667	"
Altona City	Altona	3,000	6,000	"
Williamstown City	Newport	2,000	6,000	"
Geelong City	" Kardinia "	3,000	3,333	"
Prahran City	" Chris Gahan "	3,000	4,000	"
Prahran City	" Osborne Street "	3,000	6,000	"
Prahran City	" Will Sampson "	3,000	6,000	"
Benalla City	Benalla	2,000	4,000	"
Sherbrooke Shire	" Blue Hills "	3,000	6,000	"
Kew City	Kew	3,000	6,000	"
Geelong City	East Geelong	3,000	3,833	"
Karkaroc Shire	Woomelang	200	650	1.7.76
Waranga Shire	Rushworth/Colbinabbin	3,000	6,000	1.1.77
Eltham Shire	Eltham	2,890	6,000	1.10.76
Williamstown City	Williamstown	2,000	6,000	"
Eltham Shire	Hurstbridge	576	3,248	"
Eltham Shire	Briar Hill	524	3,313	"
Eltham Shire	Lower Plenty	2,532	6,000	"
Bellarine Shire	Portarlington	600	4,000	"
Bellarine Shire	Drysdale	600	4,000	"
Bellarine Shire	Newcombe	334	1,000	"
Bellarine Shire	Ocean Grove	1,400	4,000	"
Swan Hill City	Swan Hill	2,000	4,380	"
Melbourne City	Flemington and Kensington	3,000	6,000	"
Keilor City	Avondale-East Keilor	270	1,650	1.7.76
Bellarine Shire	Whittington	420	3,500	1.10.76
Essendon City	Essendon	2,000	6,000	"
Keilor City	Niddrie	2,000	6,000	"
Portland Shire	Heywood	1,910	2,900	1.7.77
Geelong West City	Geelong West	3,000	6,000	1.10.76
Keilor City	St. Albans	465	1,810	1.7.76
Dandenong City	Dandenong	3,000	6,000	1.10.76
Ballarat City	North Ballarat	3,000	5,600	"
Cranbourne Shire	Cranbourne	1,236	2,700	1.7.76
Eltham Shire	Panton Hill	800	3,348	1.10.76
Walpeup Shire	Ouyen	288	826	1.2.77
Rodney Shire	Tatura	1,282	1,597	1.7.77
Gordon Shire	Boort	2,433	4,866	"
Croydon City	Croydon	3,000	6,000	1.10.76
Wangaratta City	Wangaratta	2,000	2,740	30.9.77
Knox City	" Wattle "	3,000	6,000	1.10.76
Knox City	Boronia	3,000	6,000	"
Knox City	Bayswater	3,000	6,000	"
Knox City	The Basin	3,000	6,000	"
Minhamite Shire	Macarthur	184	500	1.9.77
Caulfield City	" G. B. Machin "	3,000	6,000	1.10.76
Caulfield City	Carnegie/Murrumbeena	3,000	6,000	"
Caulfield City	Ormond	3,000	6,000	"
Bairnsdale Town	Bairnsdale	2,000	3,000	1.7.77
Kyneton Shire	Trentham	664	3,687	1.9.77
Kyneton Shire	Kyneton	2,960	5,560	1.7.77
Sandringham City	Hampton	3,000	6,000	1.10.76
Sandringham City	Sandringham	3,000	6,000	"
Sandringham City	Black Rock	3,000	6,000	"
Sandringham City	Beaumaris	3,000	6,000	"
Cobram Shire	Cobram	1,177	1,340	1.7.77
Heidelberg City	Macleod	2,870	6,000	1.10.76
Heidelberg City	Ivanhoe	3,000	6,000	"
Heidelberg City	" Warringal "	3,000	6,000	"
Footscray City	Footscray	2,000	6,000	"
Waverley City	" Golden Age "	3,000	6,000	"

<i>Municipality</i>	<i>Location</i>	<i>Previous approval</i>	<i>New approval</i>	<i>Effective from</i>
		\$	\$	
Waverley City	Jordanville	3,000	5,640	1.10.76
Shepparton City	Shepparton	3,000	5,913	1.10.77
Upper Yarra Shire	Warburton	1,012	6,000	"
Camberwell City	North Balwyn	446	1,314	1.7.77
Berwick City	Doveton	4,447	6,000	1.12.77
South Melbourne City	South Melbourne	3,000	6,000	1.7.77
Castlemaine City	Castlemaine	3,000	6,000	"
Berwick City	Berwick	3,830	5,630	1.12.77
Moorabbin City	" K. G. Putt "	3,000	6,000	1.7.77
Moorabbin City	East Bentleigh	3,000	6,000	"
Moorabbin City	Highett	3,000	6,000	"
Kaniva Shire	Kaniva	552	1,580	"
Ararat City	Ararat	3,400	6,000	"
Moorabbin City	" N. G. Wishart "	3,000	6,000	"
Moorabbin City	" H. Shipston "	3,000	6,000	"
Hampden Shire	Terang	2,300	3,860	"
Mt. Rouse Shire	Penshurst	2,020	3,000	"
Euroa Shire	Euroa	3,576	5,148	"
Frankston City	Frankston	3,000	6,000	"
Colac City	Kanyana	3,000	4,210	"
Ringwood City	Ringwood	3,000	5,546	"
Ringwood City	Ringwood East	3,000	5,020	"
Ballan Shire	Ballan	200	800	1.10.77
Heytesbury Shire	Timboon	1,361	1,527	19.8.77
Heytesbury Shire	Cobden	300	2,060	"
Brighton City	Brighton	3,000	6,000	1.10.77
South Barwon City	Belmont-Highton	3,000	6,000	1.7.77
Camperdown Town	Camperdown	1,600	2,467	1.10.77
Kerang Shire	Kerang	1,200	1,650	1.7.77
Collingwood City	Collingwood	3,000	6,000	"
Bet Bet Shire	Dunolly	1,400	2,000	1.10.77
Gisborne Shire	Gisborne	1,865	6,000	1.7.77
Narracan Shire	Trafalgar	600	2,733	1.10.77
Eaglehawk Borough	Eaglehawk	1,990	2,900	12.4.78
Moe City	Moe	1,667	2,333	1.10.77
Fitzroy City	Fitzroy	3,000	6,000	1.7.77
Romsey Shire	Romsey	992	5,395	1.10.77
Romsey Shire	Riddell	1,140	5,346	"
Avon Shire	Stratford	400	667	1.1.78
Broadmeadows City	Fawkner	2,000	6,000	1.10.77
Ripon Shire	Beaufort	470	1,000	"
Numurkah Shire	Numurkah	3,000	3,767	1.7.77
Port Fairy Borough	Port Fairy	1,600	3,000	1.10.77
Otway Shire	Apollo Bay	320	953	15.8.77
Orbost Shire	Orbost	1,600	2,010	1.7.77
Flinders Shire	Blairgowrie	900	6,000	1.10.77
Flinders Shire	Tootgarook	1,332	6,000	"
Flinders Shire	Dromana	1,588	6,000	"
Flinders Shire	Sorrento/Portsea	400	6,000	"
Flinders Shire	Rosebud	1,600	6,000	"
Flinders Shire	Rye	1,600	6,000	"
Flinders Shire	Flinders	736	4,100	"
Mt. Rouse Shire	Penshurst	3,000	4,122	1.7.77
Birchip Shire	Birchip	2,000	3,200	"
Dimboola Shire	Jeparit	304	1,700	"
Dimboola Shire	Rainbow	620	2,000	"
Coburg City	Pascoe Vale	3,000	6,000	"
Coburg City	Newlands	3,000	6,000	"
Coburg City	Coburg	3,000	6,000	"
Mordialloc City	Mordialloc	3,000	5,310	1.10.77
Dimboola Shire	Dimboola	1,152	2,300	1.7.77

ELDERLY CITIZENS' CLUBS—SUBSIDIES FOR NEW CLUBS

MAINTENANCE—15

<i>Municipality</i>	<i>Location of Club</i>	<i>Subsidy</i>	<i>Effective from</i>
Ripon Shire	Beaufort	670	1.9.76
Wycheproof Shire	Culgoa	460	1.7.76
Corio Shire	Lara	760	"
Newham and Woodend Shire	Woodend	3,100	6.6.77
Rochester Shire	Lockington	200	1.10.76
Rochester Shire	Gunbower	300	1.7.77
South Melbourne City	Middle Park	6,000	"
Corio Shire	North Geelong	403	1.10.77
Pakenham Shire	Garfield	700	1.7.77
Dandenong City	North Dandenong	6,000	"
Yackandandah Shire	Yackandandah	426	"
Kerang Shire	Quambatook	1,473	1.10.77
Cranbourne Shire	Tooradin	121	1.7.77
Frankston City	East Frankston	6,000	"
Frankston City	Seaford	6,000	"

SUBSIDIES FOR CLUBS ALREADY IN RECEIPT OF A CAPITAL OR MAINTENANCE SUBSIDY

MAINTENANCE SUBSIDIES—1ST APPROVAL—4

<i>Municipality</i>	<i>Location of Club</i>	<i>Subsidy</i>	<i>Effective from</i>
		\$	
Karkaroc Shire	Hopetoun	2,300	1.10.76
Essendon City	Ascot Vale	6,000	"
Tullaroop Shire	Carisbrook	2,000	1.10.77
Mortlake Shire	Mortlake	2,890	1.11.77

SUBSIDIES FOR CLUBS ALREADY IN RECEIPT OF A CAPITAL OR MAINTENANCE SUBSIDY

Additional Capital—Revised Subsidies—14

New Clubrooms—11

Furniture and Equipment—3

<i>Municipality</i>	<i>Location</i>	<i>Previous Subsidy</i>	<i>Revised Subsidy</i>	<i>Revised Commonwealth</i>	<i>Revised State</i>
		\$	\$	\$	\$
Kaniva Shire	Kaniva	77,133	85,339	75,339	10,000
Mirboo Shire	Mirboo	67,333	77,600	67,600	10,000
Kerang Shire	Koondrook	82,400	88,400	78,400	10,000
Flinders Shire	Rosebud	65,400	86,400	86,400	..
Footscray City	Footscray	212,026	246,000	244,000	2,000
Queenscliffe Borough	Queenscliffe	60,000	67,447	57,447	10,000
Northcote City	Northcote	1,453	2,045	2,045	..
Doncater and Templestowe City	Warrandyte	98,444	126,039	116,039	10,000
Orbost Shire	Orbost	1,160	1,759	1,759	..
Doncaster and Templestowe City	Doncaster	136,667	165,323	155,323	10,000
Malvern City	East Malvern	44,500	48,500	38,500	10,000
South Barwon City	Barwon				
	Heads	66,000	77,484	67,484	10,000
South Barwon City	Torquay	74,000	82,461	72,461	10,000
Frankston City	Frankston	2,274	2,457	1,638	819

SUBSIDIES FOR CLUBS ALREADY IN RECEIPT OF A CAPITAL OR MAINTENANCE
SUBSIDY

Capital Subsidies 1st Approvals—32

New Clubrooms—3

<i>Municipality</i>	<i>Location</i>	<i>Common- wealth</i>	<i>State</i>	<i>Total</i>
		\$	\$	\$
Sebastopol Borough	Sebastopol ..	58,000	10,000	68,000
Romsey Shire	Riddell ..	76,133	10,000	86,133
Flinders Shire	Tootgarook ..	188,000	10,000	198,000

Capitals approved for funding in 1978-79 were made available in the 1977-78 financial year and these were approved in the 1977-78 financial year.

New—Extensions or Furniture and Equipment—29

<i>Municipal</i>	<i>Location</i>	<i>Common- wealth</i>	<i>State</i>	<i>Total</i>
Bet Bet Shire	Dunolly ..	16,667	6,388	23,055
Mornington Shire	Mornington ..	16,555	..	16,555
Coburg City	Pascoe Vale ..	2,733	..	2,733
Buln Buln Shire	Longwarry ..	120	60	180
Frankston City	Frankston ..	1,516	758	2,274
Pakenham Shire	Cockatoo ..	466	233	699
Mornington Shire	Mt. Eliza ..	467	233	700
Mt. Rouse Shire	Penshurst ..	133	..	133
Lillydale Shire	Wandin ..	1,547	744	2,321
Nunawading City	Blackburn ..	20,006	..	20,006
Waranga Shire	Stanhope ..	4,503	..	4,503
Springvale City	Noble Park ..	1,121	..	1,121
Essendon City	Essendon ..	3,567	1,784	5,351
Portland Town	Portland ..	230	..	230
Essendon City	Ascot Vale ..	4,000	..	4,000
Chelsea City	Aspendale ..	23,056	..	23,056
Lillydale Shire	Olinda/Sass. ..	4,125	..	4,125
Camberwell City	Canterbury ..	7,641	..	7,641
Prahran City	Windsor ..	5,200	2,000	7,200
Euroa Shire	Euroa ..	2,010	..	2,010
Waranga Shire	Murchison ..	171	85	256
St. Kilda City	St. Kilda ..	3,821	1,910	5,731
Donald Shire	Donald ..	772	380	1,158
Knox City	The Basin ..	300	..	300
Knox City	Bayswater ..	8,000	..	8,000
Caulfield City	Carnegie ..	3,414	..	3,414
Northcote City	Northcote ..	2,045	..	2,045
Bulla Shire	Sunbury ..	927	..	927
Flinders Shire	Blairgowrie ..	49,333	..	49,333

ELDERLY CITIZENS CLUBS
NEW CAPITAL SUBSIDIES APPROVED

New Clubrooms—4

<i>Municipality</i>	<i>Location of Club</i>	<i>Common-wealth</i>	<i>State</i>	<i>Total</i>
		\$	\$	\$
Koroit Borough	Koroit ..	36,173	10,000	46,173
Frankston City	East Frankston ..	160,000	10,000	170,000
Cranbourne Shire	Koo-Wee-Rup ..	106,667	10,000	116,667
Malvern City	Chadstone ..	95,000	10,000	105,000

SUMMARY OF SUBSIDISED ELDERLY CITIZENS CLUBS YEAR ENDING
30TH JUNE, 1978

Total municipalities (Subsidised)	173
Total clubs	306

Subsidies Granted—

Capital subsidies for 248 clubs.

Maintenance subsidies for 294 clubs.

236 Clubs have been granted both Capital and Maintenance subsidies.

12 Clubs have been granted Capital subsidies only.

58 Clubs have been granted Maintenance subsidies only.

CEMETERIES SECTION

At present there are 758 listed public cemeteries and private burial grounds in Victoria. During the year no new public cemeteries or private burial grounds were established, but two proposals for the establishment of public cemeteries are presently under consideration. One involves the extension of a private burial ground for public cemetery purposes, and the other relates to establishment of a new public cemetery.

Many country cemetery trusts received approval to establish lawn burial areas following local demand and an effort to reduce maintenance costs.

Government maintenance grants totalling \$15,790 were allocated to 78 country cemeteries where insufficient income from burials, for maintenance purposes, was derived. Maintenance of country cemeteries in the present economic conditions is costly and most Cemetery Trusts, aided by local voluntary service clubs, are conscientious in maintaining the cemetery reserves under their control. An increase in the total allocation, however, is needed to assist Cemetery Trusts with necessary maintenance works.

During the year, Royal Assent was given to the *Cemeteries (Amendment) Act 1977* which provides for the authorization, by the Commission of Public Health, of cemetery officers for the purposes of authorising burials and erection of monuments. In addition, the amendment empowers Cemetery Trustees to remove monuments which are in disrepair and considered dangerous.

The Trustees of the Fawkner Crematorium and Memorial Park received approval to borrow \$1,000,000 to finance the reconstruction of the existing crematorium complex which is expected to be completed in January 1979. The Trustees are also proceeding with a proposal to develop land abutting the Northern Memorial Park for cemetery purposes.

During the year, licences to sign Confirmatory Certificates for Cremation were issued to fifteen medical practitioners and 489 such licences have been issued to date. Twenty-one licences to exhume the remains of bodies were issued, compared with twenty-seven in the previous year.

SPECIAL HEALTH SERVICES

The Special Health Service Section of the Department consists of a medical officer, health education officer, administrative officer, stenographer, one senior sister, five sisters and fourteen Aboriginal health aides. In general one sister and two health aides form a team to assist Aboriginal families in a specified region. Thus there are five teams operating, one in the metropolitan area and the others throughout Victoria. Other staff provide appropriate back-up at headquarters and in the field.

A recent innovation has been for staff to work from Early Childhood Development Centres.

Health workers travel widely and it is estimated that 10% of Aboriginal families in the metropolitan area and between 70% and 100% of Aboriginal families out of Melbourne relate directly to the Service. Many city Aboriginal families do not need assistance.

Training programmes are an integral and important part of the Section's work and all sisters and health aides have at least three major training sessions each year. Numerous short term training opportunities are available. This policy, combined with field experience is resulting in a group of medically competent and experienced workers, the majority being Aboriginal, who are making a significant contribution to the health and general well-being of the Aboriginal people.

Any Aboriginal health problem must be seen as a social as much as a medical problem and the Section's personnel find that their work increasingly involves general family problems which may or may not be specifically related to obvious disease in a member of the family. Excellent liaison has been established between the staff and members of other relevant agencies. Severe dental ill-health, widespread a few years ago, appears to be now under control and involving less finance. Immunisation cover of Aboriginal children is unsatisfactory in some areas and steps are being taken to remedy this. Alcohol misuse remains a major problem, but mental illness amongst Aborigines is a problem that is in the early stages of assessment.

Above all, the Section is concentrating on a preventive health approach to Aborigines and looking at the total person, family or group, and their overall well-being. This approach is in line with more realistic and concerned attitudes towards health, being developed throughout the world. It is slowly paying dividends in terms of an increased awareness by non-Aborigines of the health needs of Aborigines, and the Aborigines themselves are tending towards practices conducive to better health, greater understanding of health matters and increasing ability to cope. More use is being made of existing medical services.

The Special Health Services Section has existed in its present form since 1976 and has now become an integral part of the resources available to Aborigines in Victoria. It plays a very worthwhile role in the field of Aboriginal health and well-being.

FREE TRAVEL TO HOSPITALS

During the year there was a decrease in the number of applications received compared with that of the previous year (16,291 compared with 17,853).

Of these, 16,209 were issued with free rail vouchers and/or tram tickets to attend a public hospital for treatment. The remaining 82 were rejected as the applicants either failed to qualify as "persons of similar limited means to a pensioner", were not attending approved institutions, were visiting patients or proposed to use other than public transport.

The Government allocation for the Free Travel Section for 1977-78 was \$150,000 compared with \$155,000 for the year 1976-77. The total expenditure was \$148,483.

Refunds were granted to 75 applicants, most being caused by persons being called to hospital at short notice without sufficient time to apply for free travel.

PRISON HEALTH SERVICE

The Prison Health Service in Victoria provides medical and dental treatment for all prisoners in Victoria. In country institutions this is provided through local general practitioners and hospitals. In Melbourne an after-hours service is provided through the local practitioners. The cost of these services are:—

Year	Prisons	
	Medical	Dental
	\$	\$
1975-6	67,548	23,186
1976-7	71,713	26,904
1977-8	85,566	37,186

The major health activity occurs at Pentridge. There are three clinics in the remand prison (D Clinic), the psychiatric service (G Division), and the Pentridge clinic (E Division). Prisoners see the doctor for various reasons:—

1. At reception every prisoner is given a medical examination.
2. To be certified as medically fit for escort to another institution.
3. When they are suffering from some medical complaint.

Pentridge Hospital Statistics 1977 Calendar Year

Total visits to public hospitals	1,048
Total admissions to public hospitals	81
Deaths	5
Certifications	21
Number of addicts treated on Methadone Maintenance Programme ..	61
Incidents	97

During 1977 in Pentridge there were 97 incidents noted in the incident book. Some of the items reported include:—

self-inflicted wounds—18;

swallowed foreign bodies—9;

aggressive acts—21 (these include flooding of cells, fire in cells, refusing to eat, or destruction of equipment and furniture).

Other examples include suicide or threatened suicide, abnormal behaviour, glue sniffing, storage of tablets, and swallowing razor blades.

SPECIAL ACCOMMODATION HOUSES

This year much of the staff time has been occupied in court, and many who have been refused approval as proprietors are now legally operating by having a series of five or less residents in their several premises. This fact is currently being investigated with a view to possible amendments to the legislation.

The following have been approved by the Commission between 1st July, 1977 and 30 June, 1978:—

New Houses Registered	..	..	..	51
Registration Renewals of Houses	..	..	..	154
Transfers of Registration	..	..	..	40
Re-assessments of Registration	..	..	..	19
Plans and Specifications Approved	..	..	..	25
Managers or Assistant Managers Approved	..	..	..	129

There are presently 217 Special Accommodation Houses registered throughout the State with 24 applications in various stages of becoming registered.

In addition eight premises have had requirements issued to be completed prior to the Commission considering their applications and three premises are in the process of being constructed.

Two applications for registration have been refused by the Commission due to the relevant proprietor being considered unsuitable whilst a further nine registrations have been cancelled. Of those cancelled seven were due to non-compliance with the conditions of registration and the unsatisfactory running of the premises, one because the proprietor left and became a missing person, and one due to the proprietor establishing a chiropractic service and hence contravening the Uniform Building Regulations 1974 in that he did not have the required fire separation between the chiropractic service and the Special Accommodation House. Two registrations were cancelled by the relevant proprietors.

Three applications for registration were cancelled by the relevant proprietors prior to registration being granted.

Nine persons were summonsed to court at the instigation of the Commission for alleged offences against the *Health Act* 1958 and Regulations governing special accommodation houses. The outcome of these actions was that a total of 82 charges were laid and of these 13 were withdrawn, 6 were dismissed and 63 convictions were upheld. Resultant fines totalled \$3,005, and costs awarded amount to \$777.

During the year the Commission resolved to refuse registration of a Windsor premises on the grounds that the proprietor was not considered a suitable person and that the proposed premises were not considered suitable.

Subsequently, the proprietor appealed to the County Court against the Commission's decision and following a ten-day hearing, the Judge upheld the decision of the Commission, with costs being awarded against the appellant.

CHILD MINDING CENTRES

The following have been approved by the Commission between 1st July, 1977 and 30th June, 1978:—

New Centres	..	17	Renewal of Centres	..	317
Transfers	..	28	Re-assessments	..	37
Plans and Specifications	36		Group Leaders	..	246

The total number of Centres currently registered is 313, with 39 Centres now closed.

The average time it now takes to register a Child Minding Centre from the time application is first lodged till a Certificate of Registration is issued is now between six and nine months.

INDUSTRIAL HYGIENE DIVISION

Cases of Occupational Disease

One hundred and fifty persons were medically reviewed or assessed for occupational disease. The following classification was made:—

(a) Lead Poisoning, or excess lead absorption	..	98
(b) Pneumoconiosis	.. .. .	3
(c) Occupational Asthma	.. .. .	2
(d) No occupational disease	.. .. .	47
		150

Subclassification occurred as follows:

- (a) Under the Lead Workers (Medical Examination) Regulations approximately 2,000 workers were regularly examined. 129 workers were referred to the Division on 258 occasions for detailed investigation of their lead status. A diagnosis of lead poisoning was made for 23 persons on 31 occasions, and a diagnosis of excessive lead absorption was made for 75 persons on 114 occasions. The former diagnosis resulted in the worker being put off work and the latter diagnosis resulted in transfer of the worker to work not involving exposure to lead. The cases of lead poisoning occurred in 6 factories and the cases of excessive absorption were from 20 factories.
- (b) There was 1 case of silicosis, with radiographic change but no disability; 1 case of pulmonary asbestosis; and 1 case of pleural asbestosis with thickening but no pleural calcification.
- (c) Occupational asthma occurred in 2 persons—1 from exposure to isocyanates and the other due to metabisulphite allergy.
- (d) Amongst those diagnosed as having “no occupational disease” there was 1 alcoholic, 1 case of suspected recurrent migraine, and 2 persons with anxiety reactions.

Chest X-rays

The Division continues to arrange chest x-ray surveys for possible or suspected occupational lung disease. 576 persons had chest radiographs, of whom 65 showed some abnormality, though mostly not of occupational origin.

Lead

The total number of tests for lead exposure performed by the Division were:

Urinary coproporphyrin	.. .. .	978
Urinary Specific gravity	.. .. .	1006
Urinary lead	.. .. .	28
Haematocrit	.. .. .	738
Blood lead	.. .. .	773
Lead in air	.. .. .	50
Lead in paint	.. .. .	20
Lead in soil	.. .. .	2
Leached lead	.. .. .	7

Two cases of non-occupational lead absorption were investigated—an 18 months old boy and a retired man from Euroa. The child was found to be an avid eater of soil and a sample of the dirt at his home contained enough lead (1mg/g) to account for the excessive lead absorption. The man's exposure had arisen during mechanical sanding of old lead paint from his home, causing the evolution of dust with high lead content which he inhaled.

Cadmium

Surveillance was continued of the Cadmium hazard in a plant manufacturing cadmium pigments. The following tests were carried out:

Blood Cadmium	..	..	..	..	19
Urinary Cadmium	..	..	..	..	23
Urinary Protein	..	..	..	..	23
Urinary Specific gravity		..	..	..	30
Haematocrit	..	..	..	..	19
Cadmium in air	..	..	..	..	26

Carbon Monoxide

Ten cases of excessive carbon monoxide exposure occurred at 4 factories. In 3 of these the exposure was due to the use of poorly tuned forklift trucks in a confined space. One case occurred near a furnace.

Carbon monoxide testing was also undertaken to assess the quality of air supplied to respirators and to measure air levels in a factory testing newly assembled cars.

The Division also assisted the Police Department in the investigation of 2 deaths from carbon monoxide poisoning and attended to various requests from the public.

A total of 44 measurements of atmospheric carbon monoxide and 8 carboxyhaemoglobin estimations were performed.

Arsenic

Fifty-eight arsenic analyses were carried out for 36 people. Of these, 22 people were tested because of their possible exposure to arsenic in the copper-chromium-arsenic timber treatment industry.

There were 2 cases of raised arsenic levels as a result of arsenic compounds being administered for medicinal purposes.

Organophosphorus Pesticides

Four hundred and sixty-two estimations of red cell cholinesterase activity and 7 estimations of plasma pseudocholinesterase activity were carried out. Twenty-two people were found to have depressed levels indicating excessive exposure to organophosphorus pesticides. Four people showed clinical signs of poisoning. Two of these cases resulted from occupational use of organophosphorus insecticides while the other 2 cases were children who were poisoned as a result of ingestion of insecticide.

Surveys of cholinesterase levels in the Nar Nar Goon, Silvan, Werribee and Birregurra areas were carried out this year. More publicity resulted in a much better response from farmers than in the previous year.

Five premises where pesticides are used were inspected, and where necessary recommendations were made for improvements to handling and spraying procedures.

Other Pesticides

One case of poisoning with methomyl (an N-methyl carbamate insecticide) was confirmed by means of a red cell cholinesterase estimation using the Division's pH-stat apparatus.

Thirty-seven blood samples, mostly from pest control operators, were analysed for chlorinated hydrocarbon pesticides by the Health Laboratory on our behalf.

Thirty-seven people who used the fumigant, methyl bromide, in their work as pest control operators, were tested by measurement of inorganic bromide levels in blood. Seven had blood-bromide levels above the normal range found in the unexposed population. These were considered to be due to exposure from fumigation and subsequent aeration of stacked goods in a relatively enclosed area.

Mercury

Five laboratories where mercury is used were inspected, and mercury-in-air analyses carried out.

One hundred and fifty analyses of mercury in biological tissues were carried out. Five people had absorbed excessive amounts of elemental mercury through occupational exposure to the metal but none showed signs of poisoning.

Follow-up analyses of blood and hair samples were conducted for 11 people who had shown high mercury levels in hair when tested in a survey of 800 people during 1976-77. All results were well below the level at which symptoms of methyl mercury poisoning would be expected.

Hair samples from 155 people, selected because of the high fish content of their diets, were analysed for mercury. This was a survey conducted for the Fisheries Division of the Department of Primary Industry. Fifteen people had more than 6.0 ppm mercury in their hair. Eleven of these people were followed up with further blood and hair analyses for mercury. The results confirmed previous studies showing a correlation between fish eating habits and mercury in blood and hair. All the blood-mercury levels were less than 0.03 ppm mercury, which is well below the level at which symptoms would be expected.

In connection with these surveys, five hair shampoos and other toilet preparations were analysed for mercury.

General Chemicals

- (a) Many enquiries were received requesting advice on the toxicity and safe handling of various chemicals.
- (b) Several inspections of suspected hazardous situations on the waterfront were carried out by the scientific staff, under the agreement that recommendations on health aspects on the waterfront be dealt with by State Health Officers.
- (c) Field equipment was used for the analysis of many atmospheric contaminants such as ammonia, toluene diisocyanate, carbon monoxide and oil mist. A Miran Infra-red analyser was used to measure the concentrations of halothane and nitrous oxide in a hospital operating theatre in order to determine the effectiveness of exhaust ventilation measures.
- (d) As a result of the Division's investigations recommendations were made to some 30 factories to improve the working environment by alterations in exhaust ventilation equipment or by using improved techniques in the handling of hazardous chemicals.

Solvents

The Miran Infra-red Analyser has again proved to be an extremely valuable instrument for the field analysis of solvents.

Asbestos

There has been considerable publicity given to the dangers of asbestos this year.

A total of 138 asbestos counts were performed. Forty-four were to assess the hazard due to the crocidolite insulation in VicRail's Harris trains. It was considered that there was no hazard to the travelling public. In the case of workmen, suitable recommendations were made where necessary.

Other asbestos counts were performed at the request of Government instrumentalities, factory management, unions, and private citizens. These were done on air samples from power stations; in an air filtration plant; during demolitions; in buildings with sprayed asbestos walls and ceilings; and in numerous manufacturing industries. Of these counts, 33 were found to be excessive and appropriate recommendations were made.

The information obtained has also been of assistance to the Department of Labour and Industry in the drafting of their asbestos regulations.

Siliceous Dust

The survey of dust in foundries is continuing. Eighteen gravimetric dust estimations and 2 free silica determinations were undertaken.

Pest Control Operators Regulations 1973

During the year 5 new firms applied for registration as pest control firms; 2 persons applied for Class III licences, and 42 persons applied for Class II licences as pest control operators. There are now 257 licensed pest control operators in the State. Surveillance of the activities of these operators and investigations of complaints continued during the year.

Radiation

The numbers of licences issued to various sections of the community for the possession and use of irradiating apparatus and for possession, use, sale, transport or disposal of radio-active substances under the Irradiating Apparatus and Radio-active Substances Regulations for the year, were as follows:—

<i>Category of Licence</i>	<i>Irradiating apparatus</i>	<i>Sealed source</i>	<i>Unsealed source</i>	<i>Transport</i>
Chiropractors	104	..	..	..
Dentists	497	..	..	..
Educational and Research	31	36	58	..
Industrial	52	132	31	6
Government	21	25	26	..
General Practitioners	163	1	5	..
Veterinary	104	9	..	..
Hospitals	169	4	29	..
Other Radiology	17	11	8	..
X-Ray Clinics	24	..	4	..
Totals	1,182	218	161	6

The Australian Radiation Laboratory now regularly provides the Division with film badge reports from 321 installations where people are exposed to ionizing radiation. The reports indicate that the general level of radiation dose received by these people is well below permissible levels.

During the year the Division continued to provide a radiation protection service. Ninety Radiation installations of various types were inspected. X-ray protection designs were calculated for 4 establishments. The low level radioactive waste disposal service for users of radiopharmaceuticals in medicine and research has continued to operate satisfactorily. The Division has arranged for the appropriate storage or disposal of a number of radioactive sources.

Following newspaper reports of a possible hazardous level of X-ray emission from video display units, the Division carried out a radiation survey of some 25 different types of units. The results showed no measurable radiation emitted from any unit tested.

During the visit of the nuclear powered submarine USS Queenfish, the Division provided staff to undertake the duties of radiation monitoring officer and as a member of the Emergency Radiation Monitoring Group.

Leak tests were undertaken of a number of sealed radioactive sources used in the medical field.

Fifty-one microwave ovens were tested for leakage of microwave radiation, at the request of owners. One unit, an old model no longer manufactured, was found to be leaking excessively and the owner was advised not to use the appliance.

Noise

Noise level assessments in relation to noise-induced deafness were undertaken in 18 factories, and appropriate recommendations made.

Audiometric tests were carried out on 27 employees working in noisy industries.

The Division also contributed to the drafting of the proposed Hearing Conservation Regulations. These Regulations will require employers to alleviate the noise exposures of employees by reducing noise levels or by the use of personal hearing protection. Provision will also be made for audiometric testing of employees at regular intervals.

ENGINEERING DIVISION

Sanitation Section

Sewerage

Two new town sewerage schemes at Edenhope and Hastings were brought into partial operation during the year. Both systems employ waste stabilization ponds and dispose of effluent by land irrigation.

Construction commenced on three schemes at Romsey, Cowes and Creswick.

New Sewerage Authorities were constituted for two towns—Healesville and Daylesford.

New schemes were approved for three towns—Bright, Gisborne and Woodend.

There are now 131 Sewerage Authorities constituted in Victoria under the Sewerage Districts Act and 107 of these are in operation.

Research Development Investigations

This work has continued to increase with further applications being made to approve of proprietary sewage treatment systems pursuant to the Health (Septic Tank) Regulations 1977.

Work has also continued on Part B of the recommended practice for Sewage Treatment Systems, and the second interim draft has been finalized.

Work has continued on experimental systems, such as, the recirculating sand filter. This system has been developed to a stage where it may be accepted as a viable alternative to conventional sand filters and package plants.

Further confirmation and verification of flow figures from various classes of occupancies and contributing sources have been made.

Lectures

Mr. J. Lawrey has given a number of lectures to groups of Health Inspectors at country centres on the provisions of the Health (Septic Tank) Regulations 1977. Mr. Lawrey also gave the lecture to Municipal Engineers on Public Health Engineering at Swinburne College.

Mr. P. Jeffery has lectured on Sewerage in Victoria to students doing the Pollution Control Course conducted at the William Angliss College.

Public Hearings and Tribunals

The number of representations to the Town Planning Appeals Tribunal and Local Government Arbitrator has increased.

Inspections

Field investigations and analytical sampling of effluent have increased in connection with field evaluation testing programs for small sewage treatment plants. Routine inspections of approved installations and Sewerage Authority treatment works have reduced as a result of the former work.

Examination of plans and specifications during the year totalled 247 as shown in the following table:—

<i>Plans examined</i>	<i>New</i>	<i>Alterations</i>	<i>Sub-total</i>
Cattle Saleyards	8	7	15
EPA Licences	16	..	16
Garbage Depots .. .. .	..	..	..
Nightsoil Depots .. .. .	..	..	..
Offensive Trades .. .. .	..	2	2
Septic Tanks Pursuant Regulation 17	30	..	30
Septic Tanks and Sewerage Treatment Systems	128	18	146
Town Sewerage Schemes	4	16	20
Subdivisional Sewerage Schemes	2	8	10
Sewage Treatment Processes Approved	7	..	7
Waste Water Re-Use (rejected)	1	..	1
Total	196	51	247

Inspections carried out during the year—

Cattle Saleyards	5
Drainage Complaints	8
EPA Licences	4
Garbage Depots	1
Nightsoil Depots	1
Offensive Trades	1
Septic Tanks and Sewerage Treatment Systems	261
Subdivisional Sewerage Schemes	10
Stream Pollution and Water Supplies	5
Town Sewerage Schemes	77
Waste Water Re-Use	1
Conference, Meetings, Field Days	16
Tribunals, Courts (Days)	4
Total	393

Water Treatment Section

Officers of this Section carried out 48 swimming pool inspections and 95 inspections of water supplies. The latter inspections concentrated mainly on fluoridation stations.

All fluoridation plants serving the Melbourne and Mornington Peninsula districts are operational and effective fluoridation is in progress.

During the year the Commission directed the fluoridation of major sections of the Otway pipeline system in the Waterworks District, the Coliban system serving Castlemaine and Bendigo, and the Ballarat water supply system.

Building Surveying Section

Approval of plans and specifications for public buildings examined during the year totalled 1,434 as follows—

<i>Class of building</i>	<i>Building</i>		<i>Electrical</i>		<i>Mechanical ventilation installations</i>	<i>Separate structural examinations</i>	<i>Total</i>
	<i>Sketch plans</i>	<i>Working drawings</i>	<i>Sketch plans</i>	<i>Working drawings</i>			
Institutions	1	..	..	..	..	..	1
Public Buildings (under P.B.R.'s)	61	565	57	798	231	75	1,787
Tertiary Education Buildings	8	47	11	124	20	14	224
Schools and Commercial Colleges	26	268	15	137	34	40	520
Pre-School and Infant Welfare Centres	64	226	4	133	180	5	612
Amusement Structures and Tents .. .. .	..	..	..	35	51	..	86
Child Minding Centres	1	35	..	36	5	2	79
Day Training Centres	10	13	..	9	3	1	36
Elderly Citizens' Clubs	34	19	..	26	7	1	87
Exhibition/Seating Plans .. .. .	..	34	..	..	..	..	34
Special Accommodation Houses .. .. .	..	22	2	22	15	3	64
Total	205	1,229	89	1,320	546	141	3,530

Inspections carried out during the year				
Building Inspections	:	Day	.. ..	5,855
		Night	.. ..	11
Electrical Inspections	:	Day	.. ..	2,000
		Night	.. ..	3
Mechanical Ventilation Inspections	:	Day	.. ..	275
		Total	.. ..	<u>8,144</u>
Prosecutions				
Building	:	One (1)	.. ..	Successful
Electrical	:	One (1)	.. ..	Successful

Amusement Park Structures and Tents

Sixty-two Certificates were issued, three hundred and sixty-four were renewed, and thirteen transferred.

Land Waste Management Section

This Section administers the powers and function delegated by the E.P.A. to the Commission of Public Health. The Commission is the Delegated Agency responsible for the transport and discharge of all wastes including solids, liquids and sludges to land, i.e. the control of soil pollution. As such it is responsible for receiving licence applications, issuing and amending licences, checking licence conditions and investigating breaches of the Act.

<i>Licensing Statistics as at 30th June,</i>		1977	1978
Applications received/accepted	.. ..	1278	1391
Applications cancelled	.. ..	103	153
Licences issued	.. ..	951	1095
Licences amended	.. ..	190	738
Licences refused	.. ..	1	1
Licences pending	.. ..	223	142

Liquid Waste Committee

During the year the Section continued to represent the Commission of Public Health on the Interdepartmental Liquid Wastes Committee. This Committee is expected to file a report with recommendations soon.

There are now three disposal sites (two municipal and one private) licensed for and accepting liquid wastes in the Metropolitan area. There are also several companies specialising in the treatment of certain liquid wastes. The three sites referred to have been satisfactorily catering for the majority of substances such as solvent bearing wastes and certain toxic wastes.

Progress

The Section had largely overcome the backlog of licensing in the metropolitan area during the previous fiscal year and this year has turned its attention towards resolving some of the pressing problems of the rural areas.

- (1) A survey was conducted over the production season of all Dairy Factory applicants, in an attempt to gain a full appreciation of the complex problems involved in the disposal of whey and milk product wastes. It was found to be a field undergoing constant change due to changing production requirements, and in most cases experiments and innovations on waste disposal by the

individual applicants. The only successful approach was seen to be the development of a system to suit the needs of a particular site, and there are no "across the board" solutions. A position paper on the subject was prepared and the Section became involved in recommendations and disposal site selection on occasions.

- (2) Some success was recorded in assisting a Mildura winery through the licensing phase and their active work on upgrading of long standing disposal problems, especially with the unique difficulty in the handling of distillery wastes by disposal on land.
- (3) Following on the policy inferred from the Appeals Board's determination of the Sunshine City Council regional depot, the Environmental Protection Agency has pressed for satisfactory solutions to existing polluting discharges into groundwaters of the western suburbs, and will endeavour to discourage any future proposals to place unacceptable waste types where they may jeopardise the groundwater, until such time as a formally declared policy for this segment of the environment modifies that approach.
- (4) Land disposal proposals most commonly involve groundwater protection in some way, and the Section considers this an important part of its work. Close liaison continues with the Department of Minerals and Energy which investigates and makes recommendations on relevant applications. Some interesting results are beginning to emerge from that Department's research projects on groundwater pollution over the last few years, and some of these will no doubt modify policies in the future by allowing more confident predictions to be made on this subject.
- (5) A sophisticated new proposal for a chemical gypsum dump was received and negotiated to licensing stage. This proposal heralds a new awareness by industry of the higher standards now required, as it incorporates clay lining and underdrainage preparation in a valley head with a leachate collection and treatment system designed to block seepage to groundwater. This awareness has spread to suppliers with the launching on the Australian market of modified bentonite clays designed for special purpose low permeability lining preparations for land disposal.
- (6) A concerted effort has been made during this year towards reduction of the backlog of applications in the rural area in general, and there is now less than 100 "old" site applications to bring up to date. To assist in the efficiency of this project a mini-computer program was developed to record status and location of all unlicensed rural sites and recall by area location for trip planning.
- (7) It is noticeable that the number of "major proposals", especially for private sites and difficult industrial wastes, has increased in recent times. There is no doubt, a result of the tightening of controls into other segments of the environment, increasing awareness that land disposal may be preferable to water pollution, and that land systems can be satisfactory treatment media in themselves. For this reason the trend is expected to continue, and the need for tighter management control in the licences has become important as management of such operations is essential to the proper containment or dispersion of waste materials in the land segment.

PEST CONTROL

General pest control was maintained and investigations into a variety of complaints were carried out. These included insect infestation of foods; cockroaches in food premises and hospital kitchens; fly and rat breeding in garbage depots, poultry farms, abattoirs, flour mills and other areas.

Discussions and investigations were held with a number of municipal Health Inspectors in relation to pest control, i.e. flies, cockroaches, stored product pests etc., and advice was given as to their control.

Rat infestation of the waterfront area has been confined at a low level due to constant surveillance, and continual baiting by Harbour Trust personnel to areas susceptible to rat infestation. Field inspections, advice and assistance were given where necessary.

Liaison with the Commonwealth Health Department (Quarantine Division) continued on a satisfactory level and all notifications of rat infestation were investigated and remedial action taken.

From December 1977 till March 1978 a mosquito vector control monitoring program was conducted throughout Northern Victoria and the Murray Valley area to reduce the breeding of the mosquito (*Culex annulirostris*) thereby reducing the possibility of transmission of Australian Arbo Encephalitis. Numerous field inspections were carried out during the campaign to assess its efficiency and upon completion it was considered a most successful program.

LIQUOR INSPECTION

At the end of June, 1978 there were 3130 licensed premises in Victoria, as follows:—

<i>Type of licence</i>	<i>Total</i>	<i>Metropolitan area</i>
Hotels	1,436	634
Wholesale Liquor Merchants	102	87
Retail Liquor Stores	730	527
Private Clubs	456	271
Restaurants	277	188
Vignerons	62	13
Cabarets	27	24
Theatres	5	3
Australian/Wine	13	11
Brewers	7	4
Cider Taverns	1	1
Tourist Facilities	11	1
Residential	3	3

Not included in the above are racecourses, cricket and football grounds, airports and showgrounds.

Licensed premises visited were:—

Hotels	118
Licensed Restaurants	3
Wholesale Distributors†	17
Bottling Establishments‡	14
Wineries	12
Licensed Retail Bottle Shops	10
Airports (Tullamarine)	1
Breweries	2

† Distributors without bottling facilities

‡ Excluding wineries.

During the year the equipment traditionally used by the Inspector of Liquor was critically reviewed. As a result the use of glass hydrometers was adopted instead of the outdated metal hydrometers. Glass hydrometers are more accurate though more time is spent preparing both the sample and equipment prior to testing. Consequently the number of samples tested was lower than in previous years.

One thousand four hundred and eighty-three samples from open bottles of liquor, draft beer and draft cider were tested in the premises visited. Liquor tested was as follows:—

Whisky	..	Australian	..	..	..	154
		Imported	..	..	..	326
Brandy	..	Australian	..	..	..	166
		Imported	..	..	..	31
Gin	..	Australian	..	..	..	92
		Imported	..	..	..	21
Rum	..	Australian	..	..	..	141
		Imported	..	..	..	118
Vodka	..	Australian	..	..	..	86
		Imported	..	..	..	6
Schnapps	..	..	..	..	..	18
Bourbon	..	..	..	..	..	99
Ouzo	..	..	..	..	..	7
Tequila	..	..	..	..	..	38
Fortified Wines	..	..	..	..	..	28
Spirit Based Cocktails	..	..	..	..	..	37
Beer	..	..	..	..	..	111
Cider	..	..	..	..	..	4
						<hr/>
						1,483
						<hr/>

Testing of draft beer and draft cider was conducted in all hotels visited. All samples were found to be within the acceptable range as manufactured by the breweries. Two complaints regarding watered-down beer were investigated but no evidence could be found to substantiate the complaints.

Of the 1303 open bottles of spirit tested 39 (3%) failed to meet the bottlers' specifications. Of these 9 (0.6%) failed to meet the requirements of the Health Act. These samples had obviously deteriorated as a result of improper storage and age. In each case the quantity of liquor was small and the licensee elected to dispose of the spirit concerned down the sink.

The other 30 detected instances involved the substitution of cheap spirits for well known and more expensive brands of spirit. Action taken on each occasion varied depending on the quantity of spirit involved, varying from the voluntary disposal of the contents by the licensee to the seizure and subsequent destruction of the offending spirits. Whenever seizure of spirit occurred a warning letter was also sent to the licensee. Follow-up inspections on these premises will be conducted in due course and prosecutions will be recommended against continuing offenders.

HEALTH EDUCATION CENTRE

Increased public interest emerged in the drug education program, resulting in contact with 547 community groups and 22,000 participants.

One hundred and sixty-four talks on subjects other than drugs were given. There was particular interest shown in venereal disease (85), nutrition (22), sexuality (16), general health education (15), and miscellaneous topics (26).

In-service training seminars continued for teachers and community opinion leaders who are interested in providing health education programs.

The Centre values close liaison with the Alcoholics and Drug Dependent Persons Services Branch of the Department. The Centre's Health Education Officer, Mr. Peter Billings, who is attached to the A.D.D.P.S. Branch, has been involved in health education work, in particular to teachers, health professionals, and opinion leaders in the community.

Ms. Rosemary Hicks, Health Education Officer attached to the Special Health Services Branch of the Department, has been responsible for developing health education programs for members of the aboriginal community.

At the Early Childhood Development Program in Geelong, the Health Education Officer, Miss Beatrice Gallo is ascertaining the health needs of the community, developing health education programs to meet these needs, and carrying out in-service training of staff members at the Centre.

A close liaison has been maintained with a number of Government and voluntary agencies. Agencies with which the Centre has had a particularly close association over the year include: the Anti-Cancer Council of Victoria, the Victorian Foundation on Alcoholism and Drug Dependence, the Family Planning Association of Victoria, the National Safety Council (Victorian Branch), the Victorian Deafness Foundation, and the Thalassaemia Society of Victoria.

Close contact has also been made with the Hospitals and Charities Commission particularly in the conduct of a large seminar for community health workers on health education, the Social Welfare Department, the Department of Agriculture in the production of written material on diseases of animals transmissible to man, and the Education Department. Their co-operation is particularly valued.

Staff of the Centre are being increasingly involved in consultant work from within the Department of Health, from other Government Departments and from voluntary agencies. These take the form of advice on script writing for films, advice on the production of written material, editing of publications, and advice on the preparation of health education programs.

The Centre organized training courses for health inspectors at a number of Centres throughout the State during the year. This activity is regarded as an important facet of the Centre's activities as health inspectors are in a particularly strategic position to disseminate health information to the public in their areas of work.

Printed material is freely distributed on request.

PROSECUTIONS

During the year the Commission resolved to take legal action for breaches of the *Health Act 1958* and the Regulations thereunder, on 43 occasions.

As in the previous year the majority of the actions related to plumbing offences.

A summary of the prosecutions undertaken is as follows:—

Carrying out defective plumbing work	12
Carrying out plumbing work whilst unregistered	9
Failure to comply with conditions of registration as a Special Accommodation House	4
Conducting an unregistered Special Accommodation House	3
Other contraventions relating to Special Accommodation Houses	4
Failure to comply with a closing order issued by the Commission	2
Conducting an unregistered offensive trade	1
Operate an unregistered public building	1
Obstructing an Officer in the performance of his duties	1
Intimidating an Officer	1
Selling an unregistered proprietary medicine	1
Failure to comply with conditions of registration as a Child Minding Centre	1
Other contraventions relating to Child Minding Centres	1
Performing Gasfitting works whilst not registered as a gasfitter	1
Failing to provide information to an Inspector	1

LEGISLATION

1. During the year Royal Assent was given to the *Health (Amendment) Act 1977*.

This Act includes, in part, amendments to:—

- (a) Section 44—to enable a Council to authorise one or more of its officers or employees to exercise its powers and discretion in relation to the service of notices to abate a nuisance.
- (b) Sections 60 and 61 to enable Councils to make pro-rata refunds of rates and charges made and levied in respect of the collection of nightsoil and of rubbish
- (c) Section 65—to enable a Council to authorise one of its officers to approve or, subject to ratification by the Council, refuse an application for the installation of a septic tank system.
- (d) Section 84—a new regulation to provide for the re-use of waste water, subject to the control of the Commission.
- (e) Section 220 (1)—to extend the interpretation of “Apartment House” so that it covers premises on which there are two or more buildings.

2. The Health (Control of Pathogens) Regulations 1977 were approved during the year. The purpose of these Regulations is to require the proprietor of any establishment in which any substance is being prepared for human consumption, or the person in charge of any hospital or laboratory, when he suspects or isolates the presence of any pathogen as listed in the Schedule to the Regulations to notify the Chief Health Officer—

immediately by telephone upon such detection or isolation; and within 24 hours confirm such notification in the prescribed form.

3. Sub-Committees were appointed to review and consolidate—

- (a) The Boarding House—Apartment House Regulations;
- (b) the Offensive Trades Regulations;
- (c) the Health (Registration) Regulations.

Review of some older regulations made under the Health Act should be completed shortly. They include the following:—

- (a) Public Building Regulations.
- (b) Cleanliness (Foods, Drugs and Substances) Regulations.
- (c) Health (Ionizing Radiation) Regulations.
- (d) Health (Eating House and Food Premises) Regulations.
- (e) Camping Regulations.
- (f) General Sanitary Regulations.
- (g) Cattle Saleyard Regulations.
- (h) Child Minding Centres Regulations.

HEAD LICE AND SCABIES

In April, 1977 it was decided to subsidise municipal councils to the extent of half net costs for campaigns in relation to eradication of head lice and scabies, subject to prior approval.

With the tremendous upsurge in head lice infestation in particular, it was found that the School Medical Service staff who had previously assisted in this work could no longer cope with the demand.

Supplies of a Malathion-based preparation were manufactured by the Department and distributed free of charge to municipal councils, the School Medical Service (for schools), Social Welfare Department Institutions, and members of the public upon request. Initially, this distribution was carried out by the Poisons Division, but in the latter part of the year the task was allotted to the Poliomyelitis Division, to be handled in conjunction with distribution of vaccines. Ninety-five thousand one hundred and forty-eight bottles were distributed in the year, with a peak distribution of 19,243 bottles for the month of June, 1978. This peak of distribution was maintained thereafter for several months, and will be reflected in next year's report.

A greater demand also became established for the supply of fine-tooth metal combs which are imported from England, though it is confidently anticipated that a suitable local product will be available shortly. Nine thousand one hundred and ninety-seven of these combs were distributed for the year, but unfortunately, a large waiting list persists.

In an effort to cope with the head lice infestation widespread through the community, officers of the Commission early in 1978 conducted five successful mini-seminars at Moorabbin, Waverley, Preston, Williamstown and Cranbourne Municipal Offices specifically for local Health Inspectors of surrounding municipalities, and for Health Workers in this field, including nursing staff who were now beginning to be employed by Councils on a much larger scale specifically for this purpose. 2 further mini-seminars were conducted later in the year, at Ballarat for North-Western municipalities, and at Echuca.

Twenty-four thousand eight hundred and twenty-one dollars was distributed by the Commission to 8 municipal councils as half net costs of campaigns conducted, but the amount anticipated to be spent next year will far exceed this.

Respectfully submitted,

B. P. McCLOSKEY
S. L. COOPER
T. R. FLOOD
G. G. STILLWELL
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} Members of the Commission.

J. F. RAYNER, Acting Secretary,

September, 1978



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